USAID

Guidebook to Pension Reform

Prepared by Barents Group LLC

TABLE OF CONTENTS

NOTE:

References shown like this are in the Glossary of Terms.
References shown like this are in the Pension Atlas.
References shown like this are elsewhere in the main document.

PREFACE

There are four stages of pension reform:

(a) *Analyzing the current system.*

Most countries have some form of a pension system in operation. Before considering reform, it is critical to objectively analyze the current system to determine its strengths and weaknesses. It is also important to place the analysis within the broader context of the economic, social, institutional and political situation of the country. Pension reform does not take place in a vacuum. Many reform efforts have run into trouble because neither the current system nor the broader country situation was adequately analyzed.

(b) *Establishing policies*.

The policy design that a country adopts is the master plan of a pension reform. Through it, a consensus is reached among the constituent groups and political forces about who is entitled to what. Policies decide which population groups get how much in benefits and when, and which population groups pay how much in contributions until what age. The policies are expressed in the passage of the pension law. A poorly written or poorly designed pension law will create a poorly designed pension system, challenging whether it can work. However, a poorly written law can be smoothed out through well-designed regulations, which is reassuring as sometimes political and social realities may make crafting a good pension law difficult.

(c) *Implementing the policies*.

The implementation process guides how everything gets done and how much it costs. At this stage, it is decided how people get what the law entitled them to, and how the government ensures that contributions are made as mandated. If managed correctly, the implementation process should not change policies, only further define and articulate them. Regulations are drawn up to specify how the policies' intentions will be met in practice. For example, a regulation may define how enterprises make contributions to a licensed pension company. Other regulations may define how a company will go about making an application to be granted a license, or define the minimum standards of a licensed pension company. Implementation is expressed in the passage of the pension regulations. As noted above, strongly focused and articulated regulations can improve pension policies or allowed technical corrections to the betterment of a country's system.

(d) *Starting the day-to-day operations*.

The ongoing daily practice of the system is the true test of the policies and the implementation. Even the best plans will need constant adjustment and refinement. The best system will have detractors, attackers and those who believe that they have lost out in the reform and will try to turn back the hands of time. Thus, once daily operations begin, all the simple issues, which unfortunately can bring the system to a halt, must be dealt with. At this point, the protection of the system and workers' account balances is of utmost importance, along with constant promotion and communication reinforcing the system.

Today many countries' pension schemes are in serious trouble. Aging populations, overgenerous benefits, lack of incentives and enforcement for contributions, inadequate infrastructure are only some of the problems faced by pension and social insurance systems. The *Guidebook to Pension Reform* details the many issues involved in pension reform. While it cannot provide solutions to the many complex problems countries face, it provides a guide to help ensure that those involved in pension reform consider, in some detail, all of the important topics. It is hoped that the *Guidebook* will prove useful to those in donor agencies, such as the United States Agency for International Development (USAID), who work to develop effective and efficient programs for transitional and developing countries, where reform of social protection systems can be a foundation for sustainable economic growth and social stability.

The *Guidebook* is divided into six parts:

- Part 1: Overview of Pension and Social Protection Reform
- Part 2: Pension Policy Issues
- Part 3: Implementing Pillar I Pension Reform
- Part 4: Implementing Pillar II and Pillar III Pension Reform
- Part 5: Pension Atlas (two-page descriptions of pension systems in 30 countries)
- Part 6: Glossary of Terms

Part 1:

Overview of Pension and Social Protection Reform

INTRODUCTION

Pension reform preoccupies governments worldwide, often for different reasons, but at least with the common goal of providing income security in old age for a country's citizens. For example, in the United States reform of the Social Security system has, once again, taken center stage due to relentless pressures on the future solvency of the Social Security Trust Fund. In Central and Eastern Europe and in the former Soviet Union, the old communist pension systems are bankrupt and impose high costs on economic reform. In these countries reforming old age security programs is closely linked to general market reform and privatization. In Chile, a pension system modeled after the defined-benefit schemes now practiced in many western European countries was scrapped for a new, defined-contribution program that is managed and administered by the private sector.

Despite substantial institutional differences across the social insurance systems practiced in these and other countries, there are common principles that apply to pension reform everywhere. This *Guidebook* presents this common framework and illustrates its relevance to countries that are in widely differing stages of economic and political development.

Pension and social insurance reforms are always controversial. They are controversial from both a social and political perspective and from an analytic perspective. Political differences arise for many reasons including:

- Pension and social insurance systems often involve redistribution of income, making some individuals gain while others lose;
- Who should bear the risk for assuring that promised benefits will be available;
- Changes to an existing system may be seen as breaking promises made to individuals in the past; and
- Which groups should be covered by the social insurance system and should certain groups be treated differently.

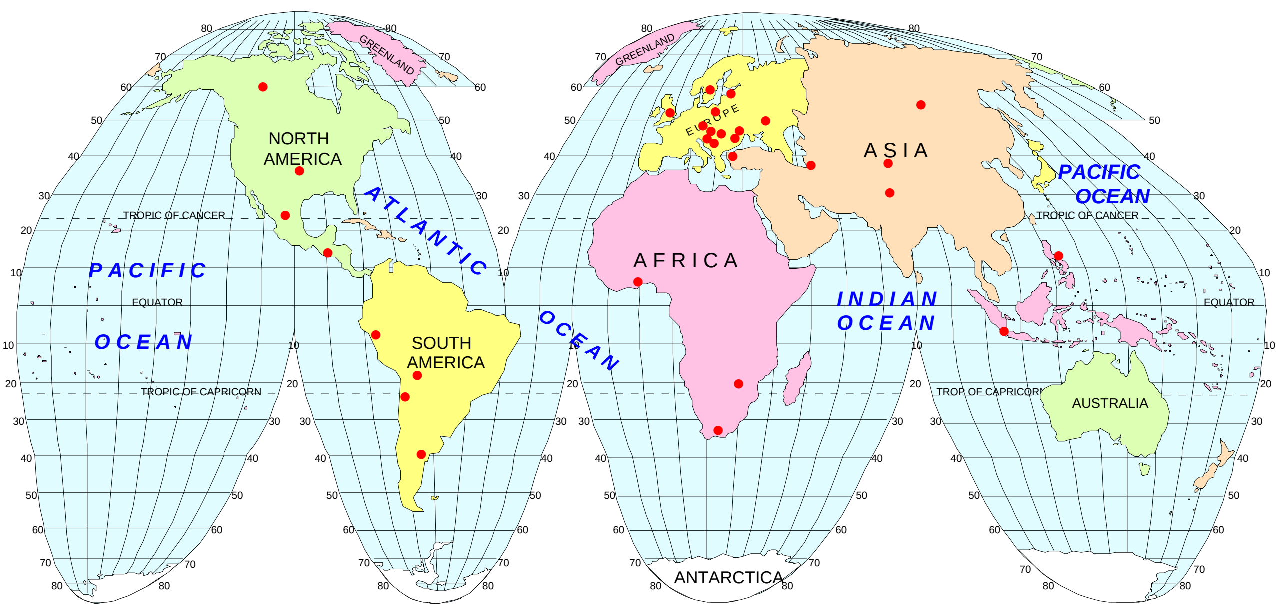
Reasonable analysts also disagree over many aspects of pension or social insurance policy. Debates continue over issues such as:

- The balance of public and private responsibility for the pension system;
- The appropriate replacement rate for workers with different wage histories;
- The merits of defined-benefit vs. defined-contribution plans; and
- The source of contributions to different types of pension funds.

This *Guidebook* cannot and does not attempt to resolve these political and analytic issues. Rather, it attempts to lay out for the reader, the many issues and subjects that must be addressed when considering pension reform. The main audience is individuals in USAID offices around the world who may be faced with pension reform as part of overall social sector restructuring and promotion of economic stability and growth. The *Guidebook* attempts to provide individuals with little background in pension policy or reform with a basic understanding of the main policy and implementation issues current in pension reform debates. It is also comprehensive enough to be useful to those more experienced in pension reform. For these readers, the *Guidebook* can serve as a thorough checklist of important topics that should be addressed in pension reform.

The *Guidebook* contains six major sections. This *Overview* provides a basic introduction to many of the important terms and concepts in pension reform, as well as some organizing principles. It also provides a brief introduction the economic underpinnings of pension and social insurance policy. The three main sections of the *Guidebook* are the Guide to Pension Policy Issues, the Guide to Implementation of Pillar I Pensions and the Guide to Implementation of Pillar II and Pillar III Pensions. These sections detail the major issues to be addressed in designing pension policies and laws and implementing pension reform. The *Guidebook* also contains an Atlas of Pension Reform. The *Atlas* contains succinct two-page summaries of the current status of pension systems in many countries in which USAID operates and other countries whose pension systems illustrate many of the pension reform issues and principles detail in the *Guidebook*. The *Guidebook* also contains a Glossary of pension terms and a *Bibliography* of pension-related books and articles.

Click on a country name and go to that page in the Atlas section.



Argentina	Croatia	Indonesia	Peru	Sweden
Bolivia	Czech Republic	Kazakhstan	Philippines	Turkey
Bosnia	El Salvador	Kyrgyz Republic	Poland	Ukraine
Bulgaria	Georgia	Latvia	Romania	United Kingdom
Canada	Ghana	Mexico	Russia	United States
Chile	Hungary	Moldova	South Africa	Zimbabwe

Social Protection and Social Insurance

What are Social Protection and Social Insurance?

The largest component of public spending in most countries is usually directed towards programs or policies collectively referred to as the "social safety net," "social insurance," or, more broadly, the "welfare state." A social safety net can refer to programs that provide individuals with protection against economic hardship caused by factors beyond their control, through income support in cash or in-kind. These programs assist people who are poor or who would otherwise be poor if not for these programs.

Social insurance programs also provide protection against economic hardship, but benefits are often not contingent on being poor. Welfare state activities can refer to a broader set of programs, including health care, housing, and other social services, such as childcare for the needy. It might also incorporate government activities that regulate economic behavior and markets in the interest of consumer protection or worker safety. Government typically plays a dominant role in providing and overseeing these activities, although programs can be arranged and financed privately.

Pension programs for the retired, the disabled, and surviving dependents are part of these activities, and include characteristics of a social safety net as well as social insurance more generally (See Table 1).

Table 1. Social Insurance Programs

Social Insurance Programs	
Public and Private Pensions	***Health Finance and Delivery***
Unemployment Benefits	***Health Promotion***
Mean's Tested-Transfers	***Child Care***
Workers Compensation	***Job Training***
Maternity and Sickness	***Employment Services***

Objectives and Rationale

Why do safety net and other social insurance programs exist? This question is especially appropriate now with the collapse of communism and the emergence of market-driven economies around the world. In market economies, there is greater reliance on the self and less on the state, both in purchasing goods and services and in earning income. This philosophy can extend beyond the provision of most goods and services to include safety net and social insurance activities. However, safety net and other state welfare programs require the continued exercise of state power to redistribute revenue, from those with income to program beneficiaries. Moreover, almost all modern industrial nations have extensive social assistance programs of some kind, even those with deeply entrenched market economies.

Some argue that public social insurance programs make capitalism politically viable. Unfettered markets are efficient, highly productive, but potentially merciless towards those unable to compete. Although markets can provide insurance against some contingencies, such as old age and poor health, they might not provide enough insurance at affordable prices. If adverse selection--the tendency for people who have higher than average risk to oversubscribe to insurance programs--is severe, markets for certain types of contingencies might not form at all. It would be difficult if not impossible for some people to protect themselves from the vagaries of the market if they were unable to purchase insurance. Social programs assist in these situations. Therefore, the relevant question policymakers face is not whether to have such programs, but how much and in what form.

Over the past century, social programs have evolved in all of the industrialized countries. The first national program sponsoring pensions for retirement and disability was adopted in Germany in the 1880s. Similar programs were adopted in Great Britain and other European countries early in the 20th century. In the United States, the first major social insurance program was adopted in 1935 as the Social Security Act.

Pension Systems: Types and Pillars

Virtually every developed country and many developing ones have a pension system of some kind. These systems vary considerably, and no two are exactly alike. Nonetheless, most systems fall into one of two main types or categories:

- Defined-benefit model, and
- Defined-contribution model

Traditionally, most public and many private pensions systems were of the defined-benefit type. More recently, defined-contribution systems have become increasingly popular. Countries also structure their pension systems in different ways. The basic ways in which pension systems are structured are commonly referred to as "tiers" or "pillars." The following table illustrates the most common ways that pension systems can be organized.

Type	Pillar I: Mandatory PAYGO (or Partially Funded)	Pillar II: Mandatory, Funded Individual Accounts	Pillar III: Voluntary Private Pensions
Defined-Benefit	**Yes**	**No**	**Yes**
Defined-Contribution	**Yes**	**Yes**	**Yes**

Pension systems can be of a single type (defined-benefit or defined-contribution) and a single pillar, or they can be multi-pillar systems that combine elements of both basic types of systems. The following sections:

- Provide basic definitions of the pension types and pillars;
- Describe each possible combination of pension type and pillar. The only combination that is not feasible is a Pillar II defined-benefit approach, as a Pillar II pension component is, by definition, a defined-contribution type pension.
- Discuss how countries have combined approaches into multi-pillar pension systems.

The following sections are meant to be an overview of different pension systems. The *Guidebook* chapter on pension policy issues more fully describes the differing goals of pension policies and pros and cons of various approaches.

The Defined-Benefit Model

In this model, the benefit formula is specified (or "defined") in detail, and contributions to fund these benefits are then determined, as required. The U.S. Social Security system is a defined-benefit system, as are most systems in Central and

Eastern Europe, the former Soviet Union, and Western Europe. Contributions to these systems are often proportional to earnings (e.g., flat-rate payroll taxes), often shared between the employee and employer, and are sometimes subject to a ceiling. Benefits are typically related to past earnings of a worker and to period worked. Payment to beneficiaries or to their dependents (or heirs) typically begins upon retirement, disability, or death, and takes the form of periodic (usually monthly) payments, which are sometimes indexed to inflation, but not always. Contributions are not allocated to individual accounts, and are not directly linked to the benefits one receives. Some of these schemes are "pay-as-you-go (PAYGO)," which means that current benefits are paid entirely by contributions of current workers.

Alternatively, these schemes can be "partially-funded" or "fully-funded." In a fully-funded system, benefits for a given generation of workers are funded by contributions, accumulated interest and dividends made by these workers during their working years. In the United States, many employment-based private pension systems are of the defined-benefit type and are required by law to be fully funded and actuarially sound. A partially funded scheme, such as for U.S. Social Security System, finances current benefits from both accumulated earnings and contributions of current workers.

THE DEFINED-CONTRIBUTION MODEL

In this model the contribution rate is specified, and benefits are then determined by accumulated contributions and their earnings. Contributions are made on behalf of an individual to a specific account. These contributions can be collected by the government as a payroll tax on employees and employers and then deposited in an account on behalf of each worker. Alternatively, even without a payroll tax per se, mandated contributions could be withheld by employers to be deposited in a worker's account. Contributions might also be made voluntarily by an individual, sometimes with associated tax advantages. These contributions grow, often tax free, in the worker's account, until retirement, disability, or death. Upon retirement, the accumulated contributions and earnings could be used (perhaps mandated) to purchase an annuity, or could be drawn down or paid in a lump sum to the worker. Many private pension arrangements in the United States follow the defined-contribution model, such as 401(k) and 403(b) retirement plans. The pension system in Chile is, for the most part, a defined-contribution model.

PILLAR I

Pillar I refers to a mandatory, public pension system in which contributions are not directly deposited into individual accounts of workers. The government exercises its sovereign taxing power to require contributions from workers, employers or other categories of individuals or enterprises. In the pension reform literature, Pillar I systems are generally referred to as PAYGO pension systems, though this is not strictly true. Contributions may be used to pay for benefits of current retirees

(PAYGO) or used for a combination of financing future pension benefits and current pension costs. Often, the degree to which a Pillar I system is funded depends on the overall financial position of the government. To the extent that the government has a chronic budget deficit and must tax and borrow from the public to finance current operations, forward funding of a pension system may be more "on paper" than real.

Most countries with pension systems have a Pillar I component, even if they have moved away from relying on Pillar I as the dominant component of the pension system. The United States Social Security System and the Swedish *Folkpension* are examples of dominant Pillar I systems, while Chile's minimum pension guarantee is an example of Pillar I component playing a less dominant role.

PILLAR II

Like Pillar I, Pillar II is a mandatory pension component. The government requires contributions on behalf of certain categories of individuals. Contributions may come from individuals, employers or the government. Unlike a Pillar I system, however, contributions are deposited in individual accounts and an individual's retirement benefits will depend on the balance in the account and accrued interest at the time of retirement. The accounts may be managed by either a public or private entity. However, since the system is mandatory and designed to meet certain social goals, private entities managing individual accounts are usually subject to considerable government oversight and regulation.

Pillar II pension systems are becoming increasingly popular, with Chile often being cited as the model from which others have been derived. Other countries with dominant Pillar II systems include Bolivia, Argentina, and the new system in Hungary.

PILLAR III

Pillar III comprises the full range of voluntary private pension systems. In this case, the government does not mandate participation or make contributions. Historically, Pillar III pensions have been either occupational plans or personal savings plans. Employers sponsor occupational plans. Interestingly, the first pension systems in many countries were mandatory (Pillar I) occupational plans, usually for civil servants or the military. (In some developing countries public, mandated occupational systems are still about the only type of pension system, such as Indonesia's pension system). Personal savings have always been a way for individuals to plan for their retirement years. Governments often take steps to encourage personal savings for retirements often through tax incentives.

Although Pillar III is voluntary, governments undertake significant legislative and regulatory oversight of private pensions systems. In some cases the regulation is designed to protect workers financial interests (e.g., requiring that fund managers be licensed, or companies to adequately fund their pension plans). In other cases, the government's role may be to prevent private pension systems from undermining the social goals of the public pension program. For example, if the public program redistributes income from higher income to lower income individuals, the government may impose regulations on private pension funds to ensure that lower wage workers are not discriminated against.

It should be noted that while Pillar III is characterized as voluntary, it is voluntary in the sense that the government does not mandate participation. Some private employers often do make participation in a pension scheme compulsory for their employees.

COMBINING PILLARS AND TYPES

Pillar I Defined-Benefit System

Pillar I defined-benefit pensions systems have been the dominant form of social insurance for retirees in most developed economies and in the former communist systems. Though these systems vary considerably from country to country, the basic principal is that the government mandates contributions (typically from employers and employees) to the system and defines the benefits a pensioner will receive. Contributions are often, but not necessarily, in the form of a flat percentage tax on wages (payroll tax). Pension benefits are usually based on a formula that takes into account items such as years of covered employment, wage history and marital status. Benefits often bear little relation to contributions made over individuals' lifetime. Benefits are usually paid in the form of an annuity that may be indexed to changes in prices or wages.

Pillar I defined-benefit systems are relatively inexpensive to operate during the early years when there are few retirees relative to workers. However, as they mature, costs increase dramatically. In part because of their cost, the fact that benefits are not related to contributions, and the increased burden that PAYGO systems place on current and future workers, Pillar I defined-benefit systems have come under attack in recent years and many reforms are designed to replace them or minimize their overall importance.

Replacing a mature Pillar I defined-benefit pension system presents a number of political and practical problems that are discussed in subsequent sections of the *Guidebook*. Though reforms often seek to reduce the role of the Pillar I defined-benefit system, it is almost never fully replaced. These systems are usually kept at least to provide a minimum or guaranteed benefit to help lower income individuals.

Pillar I Defined-Contribution System

Pillar II defined-contribution systems are a relatively new form of public pensions. Under this approach, the government mandates contributions to the pension system. The government keeps track of individual contributions through what are usually called notational accounts. Individuals do not own the assets in the accounts and the actual contributions may be used to fund current governmental operations. In this sense, Pillar I defined-contribution plans are still PAYGO systems. However, the notational accounts are credited with some form of interest or earnings, usually defined in law. For example, the accounts may be indexed to wage or price growth.

When an individual retires, benefits are based on the balance in their notational account and their life expectancy. This benefit structure protects the system from both early retirements and changes in life expectancy over time. If an individual chooses to retire early, their monthly benefit will be reduced because their life expectancy will be longer. Similarly if life expectancy increases through, for example, improved health care, then individuals in the future would have to retire at a later age to receive the same level of benefits as current retirees. Sweden, Latvia, and the system in Poland are models of a Pillar I defined-contribution approach.

Pillar II Defined-Contribution System

A Pillar II defined-contribution system is a mandatory pension system in which contributions are deposited in individual accounts. Contributions and account balances accumulate based on the way in which the funds are invested. At retirement, benefits are based on the accumulated balances in the accounts. Since it is a mandatory system, both eligibility for benefits and the form of the benefit are usually a matter of law. For example, individuals may be required to purchase an annuity with their accounts, or they may have the choice between an annuity and a lump-sum benefit.

In recent years, Pillar II defined-contribution systems have gained greatly in importance in pension reform. For example, the four basic pension reform options recommended by the World Bank in *Averting the Old Age Crisis* all rely on this approach as a key element of a multi-pillar pension system. Because these systems are mandatory and are expected to provide a major source of retirement income, extensive government regulation is almost essential. Regulations governing the funds usually involve broad information disclosure, solvency and licensing requirements, investment rules, backup insurance and establishment of a supervisory authority. Chile is seen as the original model for a Pillar II defined-contribution system but other countries such as Argentina, Bolivia, Kazakhstan, and Hungary have or are in the process of introducing this type of system as part of their reformed pension systems.

Pillar III Defined-Benefit System

A Pillar III defined-benefit system involves voluntary private pensions with defined benefits. Plans are usually occupationally based; that is, they are sponsored by employers, and are set up either voluntarily by employers or through collective bargaining. The pension benefit usually depends on years of service and some measure of a worker's salary over the last years of employment. Employees usually have to work for a specified number of years before they have a right – are vested – in the system. Employers often retain the right to terminate or convert accrued benefits to a defined-contribution scheme.

Since the plan is a defined-benefit, employers, rather than employees bear more of the risk, since they will be required to pay benefits without regard to how well investments have performed. On the other hand, employees bear risks as well. The employers' financial situation may make it impossible to pay benefits, the plan could be terminated, or the individual's wages could fall in years before retirement.

The plans may be fully-funded, partially-funded, or PAYGO. With certain major exceptions, most Pillar III defined-benefit systems in developed countries are close to fully-funded. In developing countries, unregulated voluntary private pensions are mostly unfunded and pose serious financial risks to employees. Over time, significant regulations of Pillar III defined-benefit systems usually develop including actuarially sound funding of pension liabilities.

Pillar III Defined-Contribution System

In developed countries, voluntary defined-contribution systems have grown rapidly in recent years. These plans can be either occupational or personal savings plans. In the United States, many firms have converted their defined-benefit plans to defined-contribution plans. In addition, private tax preferred savings plans such as 401(k) plans or Individual Retirement Accounts (IRAs) have gained great popularity. Whether employer sponsored or personal, the principals are the same. Funds are deposited into private accounts, usually on a tax-deferred basis, and are available at retirement as defined in law. Often, individuals may "borrow" funds for approved purposes during their working careers paying the borrowed money back with interest over time. Individuals may also withdraw funds for other purposes, but must pay tax and significant penalties.

By definition, Pillar III defined-contribution plans are fully-funded. Financial institutions, insurance companies, or brokerage houses often administer them. Individuals may have options for investment of the funds but they are often limited to selecting between bond, equity, and money market funds. The risks to individuals are generally the opposite as for voluntary defined-benefit plans. The individual bears the risks related to investments, but bears less risk associated with corporate financial positions and plan termination.

MULTI-PILLAR MODELS FOR PUBLIC PENSION REFORM

Most pension systems in developed countries combine elements of different pension pillars. However, the systems are typically dominated by the Pillar I public component and are basically single pillar systems. Another form of single pillar pension system has been the publicly managed mandatory savings accounts, or provident funds. Analysts have increasingly recognized that the different pillars best serve different functions and that single pillar pension systems may not be the best approach to achieving the central policy goals of a pension system.

A key policy issue for governments designing pension and social insurance systems is to balance re-distributive, savings, and insurance functions.[1] Each pension pillar serves these three functions in different ways. Depending on a country's situation, combining the approaches into a multi-pillar pension system may be the most effective way of balancing pension objectives. It is not the purpose of this *Guidebook* to recommend a particular approach to pension reform. Given the vast diversity in countries' economic and social conditions around the world, there is not likely to be a "right" pension reform.

However, the three-pillar model can serve as a useful construct to illustrate how the different approaches can fit together to serve different policy goals or functions. The strengths and weakness of the different components are more thoroughly described in the Pension Policy Issues section of the *Guidebook.*

The three-pillar model separates the major objectives of social security into three pillars, each with its own source of funding. The first pillar provides social safety net support to everyone; the second pillar emphasizes savings and promotion of growth, and the third pillar encourages discretionary savings and capital development.

The first pillar addresses redistribution and social safety net issues directly, and provides basic support for everyone. In developing countries, "basic" support would typically mean subsistence-level assistance, whereas in developed countries it could mean assistance to provide at least a poverty threshold standard of living. For example, in the United Kingdom this is defined as a flat-rate percentage of 14 percent of average national earnings for all workers. In Chile, this is defined as a minimum pension guarantee for all workers. Benefits could be universally provided, or could be means-tested, although the former would be considerably more expensive than the latter. Everyone in society would participate, whether or not one has worked in the formal economy. In virtually all versions of this model, this pillar would be publicly managed and funded from general revenues, in part because even those who prefer an enlarged role for the private sector in pensions recognize that redistribution is best achieved through government intervention.

[1] *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth.* The World Bank. Oxford University Press. 1994.

Many countries have extended Pillar I well beyond this basic re-distributive function of having Pillar I also provide a significant portion of retirement income even for the non-poor. While many analysts argue that this has served retirees well, there are problems with extending Pillar I past the basic re-distributive and poverty alleviating function. These include high contribution rates, tax evasion, and labor market distortions.

The second pillar would provide retirement income above the poverty floor up to a level that society feels is necessary so that the elderly will not be a burden do to lack of income. According to the World Bank's version of the three-pillar model:

> "*Unlike the public pillar – which is redistributive, centrally controlled, and tax-financed -- the second mandatory pillar should emphasize savings. It should therefore be nonredistributory and fully funded, with decentralized control over the accumulated pension and savings reserves. It could be based on occupational schemes, personal accounts, or a combination of both*[2]."

The second pillar must be mandatory for several reasons. These include the problems associated with adverse selection--i.e., high-risk people drive out low-risk people; economies of scale--i.e., declining average program costs; paternalism—i.e., that people are incapable of planning for their own retirements; and the free-riding by "grasshoppers"--that is, people who save too little during their working lives knowing that social programs will take care of them when they are old, whether or not they save.

Linking contributions to benefits is important to discourage tax evasion and to encourage labor force participation. Workers are more likely to work in the formal sector and to pay their contributions when they perceive that these contributions are not a tax and bear directly on benefits to be received later. Those who avoid contributions, for example, by working in the informal sector or by retiring early, and those who evade their contributions, for example, by arranging with their employers not to pay legally mandated contributions, receive smaller benefits during retirement when contributions are linked to benefits. When there is no connection, as in a purely PAYGO system, a worker can pass program costs on to others.

Privately managing the second pillar also has advantages. First, competitively managed pension funds are more likely to focus on maximizing investment returns and reducing risk for shareholders, who are the owners of retirement plans. Publicly managed funds, especially those in developing countries, are vulnerable to political pressures to invest in poorly performing state enterprises or to provide an easy source of capital for government projects. Second, private management of pension funds can foster the development of financial markets within a country by creating demand for financial products and institutions. Both of these advantages are also possible in a publicly managed system, provided that fund managers invested contributions in the capital markets. This suggestion has been put forth as a possible reform for U.S.

[2] Ibid.

Social Security, which would gain from scale economies in administering the funds and in producing retirement annuities. Although private competitive management provides incentives for good performance, extensive government regulation is important to compensate for market failures such as lack of information by workers and socially inefficient restrictions imposed by employers.

The third pillar in almost all variations of this model is voluntary, fully-funded, and privately managed. In some cases, such as in Chile and the United Kingdom, this pillar is a part of the public system. In other cases, such as the United States, this pillar complements the public system, but is separate from it. In many countries there are company pension plans, other retirement savings vehicles (such as company-sponsored tax-deferred retirement savings plans), individual retirement accounts, and other retirement savings vehicles. In some cases contributions are given favorable tax treatment, for example, when taxes on contributions and their accumulated earnings are tax-free until withdrawn during retirement.

REASONS FOR PENSION REFORM

While problems faced by pension systems differ from country to country, they generally fall into one or more of several categories. Since most established pension systems are of the Pillar I PAYGO defined-benefit type, many, but not all, of the problems relate to this type of system. More detail on the problems facing pension systems can be found in the Identifying Problems section of the *Guidebook.* The general categories of issues faced by pension systems include:

Maturing of the System. In the early years of a new pension PAYGO or partially funded system, there are, almost by definition, many more workers contributing to the system than retirees receiving benefits. As the system matures, more and more individuals reach retirement age (or are disabled) and begin receiving benefits. This generally leads to an increase in the dependency ratio – the number of people receiving benefits compared to the number contributing to the system. This will be the case even without the "aging" of the population (see below). If the system was not designed to cope with maturing (and often it is not due to political pressure to keep contributions low) a financial imbalance can occur.

Demographic Shifts. The changing demographic profiles of countries around the world poses perhaps the most widespread problem facing pension systems. Declining birthrates and increased life expectancy are causing populations to "age." This is particularly true in the developed western countries, Central and Eastern Europe, and the Newly Independent States. Population aging, as with maturing pension systems, increases the dependency ratio and puts financial pressure on current workers. In defined-benefit systems, since benefits are not directly linked to contributions over a lifetime, increased life expectancy means that benefits may be paid out over a longer time than was anticipated when the financing of the system was designed.

Contribution Evasion. Evasion of taxes is a problem faced by all countries. In countries that have extremely high payroll tax rates and large informal economic sectors, evasion is often widespread. This can undermine the financial structure of the pension system. The result can be an inability to pay benefits in a timely manner or at the promised level. Evasion also places greater burden on the employers and employees in the formal sector paying taxes. At its worst, the increased burden can lead to a spiral of flight from the formal economic sector and loss of competitive position for those that remain. Many former communist countries face this situation as do some countries in Latin America and Southeast Asia.

Generosity of Benefits. Whether pension benefits are too generous is a relative question. Some countries and their economies can afford more generous pension benefits than others. However, there are several ways in which benefits could be made too generous. These include:

- Early retirement age for pension benefits,
- Replacement rates that are too high (to see a table of target wage replacement rates click here), and

- Limited participation in covered employment for full benefits.

Economic Transition and Instability. Although public welfare systems are under scrutiny world-wide, the decision regarding the trade-off between spending on social security and investing in economic growth is particularly difficult in transition economies because of the fragility of their financial and social situation, and the pressures on expenditures resulting from economic transformation.

OTHER MAJOR POLICY ISSUES

In addition to the basic structure of a reformed pension system, policymakers must address many other substantive issues. The specific nature of the policies to be addressed in these areas will often differ depending on the particular part of a multi-pillar system is under consideration These issues are addressed in some detail in the Pension Policy Issues section of the *Guidebook* and include:

Coverage. Coverage deals with what part of the population will participate in the system. Will coverage be mandatory and universal or will some subset of the population, such as civil servants or workers in firms over a certain size be covered? Policy questions can also deal with the coverage of spouses or dependents. A country may choose to have universal coverage for a Pillar I minimum guaranteed benefit program, but more limited, employment-based coverage for a funded Pillar II system of private accounts.

Eligibility. Eligibility refers to the conditions under which an individual would receive benefits from the system. Eligibility for pension benefits is often based on a combination of factors that include age, work history and participation in the system, disability status, or relationship (spouse/dependent) to a covered individual. For example, an individual might be eligible for full, unreduced benefits at age 65 with a minimum number of years of coverage (participation) in the system. Defined-contribution systems usually have simpler eligibility rules that do not require a specific amount of time contributing to the system beyond the basic vesting period. Policy issues related to eligibility generally deal with how these various factors will be combined to fully define individuals' entitlement to pension benefits.

Benefit Structure. One of the most important policy issues that must be addressed is the structure of the pension benefit. At the most fundamental level, the basic issue is between a defined-benefit and a defined-contribution structure. These issues were addressed earlier in this overview. Other significant policy issues include:

- What average replacement rate is appropriate and affordable?
  (see Target Replacement Rate)
- Should benefits be flat, means tested or employment related?
  (see Benefit Design Issues)
- On what events should benefits become payable?
  (see Specifying Events Leading to Benefit Payments)
- Should guarantees be offered?
  (see Guarantees)
- Should benefits be indexed to wages or prices?
  (see Indexation)
- Should benefits be taxed?
  (see Tax Implications)

Contributions. Except in the case where benefits are financed from the Government's general budget, specific contributions are usually made by covered individuals to finance the pension system. These contributions can either be mandatory (tax) or voluntary (savings). Policy issues related to contributions include:

- What sorts of contributions should be permitted?
  (see Types of Contributions)
- What rate is appropriate?
  (see Contribution Level)
- Should the rate be the same for all workers?
- On what earnings basis should contributions be determined?
  (see Contribution Base)
- Should contributions be taxed?
  (see Tax Implications)
- How should contributions be collected?
  (see Contribution Collection: Centralized versus Direct Transmittal)
- How quickly should contributions vest?
  (see Vesting)

Retirement Age. Pension benefits are generally provided to support individuals who, through age or disability, are no longer expected to work to support themselves or their families. However, factors other than ability to work are considered when defining the age at which benefits can be received. These issues can include providing incentives for older individuals to retire to make room in the labor force for younger workers and postponing the retirement age to take into account increase life expectancy or to help promote the financial soundness of the system. As noted above, eligibility for retirement benefits at early ages has been a cause for financial problems (and adverse labor market effects) for pension systems in some transition economies. In addition to defining the normal retirement age, policymakers may also provide for retirement at earlier ages with some conditions (such as actuarially reduced benefits).

Transition. When undertaking reform to an existing system, some of the most difficult policy issues involve the transition from the old to the new system. This can be the case for both relatively simple changes like increasing the retirement age or revising a defined-benefit formula and more complex changes such as introducing a Pillar II fully-funded system to replace. The difficulty of transition issues can result from the fact that the rules under which individuals have been working and planning for retirement are changing or because of the difficulty of financing a new fully funded system while still paying benefits for some time under the old PAYGO system. Although there are numerous transition issues, some of the major ones include:

- Phase-in period for changes,
- Running two systems or one,
- Sources of financing, and
- Phase-out period for old system.

IMPLEMENTATION ISSUES

Too often in the debate over reform of a country's pension system, too little attention is paid to the difficult problems of successfully implementing a pension reform. Whether it is implementing a system of unique individual identification numbers, procuring the necessary computer software and hardware, establishing a supervisory body, or creating an efficient benefit payment system, and adequate attention to implementation is critical to pension reform. While some implementation issues overlap, the *Guidebook* separates them into sections addressing Pillar I Pension Reform and Pillars II and III Pension Reform.

Pillar I implementation issues include:

Identification. An elemental part of a well-structured Pillar I pension program is a reliable and secure system for identifying employers and employees who will be contributing to the pension scheme. Identifiers must have certain attributes. They must be unique in order to provide reliable identification of individual and employers. For individuals, the unique identifier must never change over their lifetime. The central government (or designate agency) must also establish a highly secure method must exist for issuing identifiers in order to prevent issuance of multiple number to the same individual. Individuals must present a valid identifier when seeking employment. This is intended to provide incentives for compliance and participation in the formal sector. Finally, disclosure of an individual's identifier should be severely restricted, as the number provides sensitive employment and earnings information.

Centralized Administration, Record Keeping, and Information Management. A single agency must have the sole authority to implement the enabling legislation of the Pillar I pension program and must also interface with the governmental agency with the oversight of any Pillar II or Pillar III pension programs and private pension funds. This central social insurance agency would have many responsibilities, such as: issuing unique identifiers; collecting contributions; determining benefit eligibility and payment; maintaining a database of earnings and contribution records; and enforcing contribution requirements of employers and employees. Another important issue is the budget allocated to the social insurance agency, as its level of funding is important in determining the agency's ability to perform its responsibilities and attract adequate staff to perform those functions.

Contribution Collection. One of the prime operating functions of the social insurance agency is the collection of contributions, allocation of contributions, and maintenance of records regarding earnings and contributions. There are a number of regulatory mechanisms that will assist in efficient contribution collection and recordkeeping.

It is important that a requirement be placed on employers to make contributions and submit the proper information so that contributions are properly accounted for each individual worker. In addition, a mechanism must be established to receive contribution payments and accompanying information. The banking system is generally able to handle the tremendous flow of information and funds. Creation of uniform reporting format enables the agency to accurately record earnings and contributions data. Finally, the social insurance agency must also be able to store and retrieve this information for enforcement purposes.

Benefit Eligibility and Payments. The social insurance agency must establish a readily accessible and efficient process for applicants to submit claims and provide evidence of entitlement to benefits. Moreover, the agency must also calculate the amount of those benefits, and establish efficient and secure procedures for transmitting payments to eligible individuals. In executing these responsibilities, the social insurance agency must:

- Develop an application form designed to ascertain information such as the applicant's name, unique identifier or other vital statistic;
- Determine the optimal location and level of staffing of agency branches based both on the need to serve workers and beneficiaries as well as the availability of communications facilities to the central office;
- Establish a process for a review of benefit determinations;
- Develop procedures for accurate and efficient payment procedures through banking facilities or other alternative methods;
- Maintain exact records of payments made for enforcement purposes or reporting requirements to the central government or other agencies.

Dispute Resolution. It is unlikely that economies instituting Pillar I pension systems or reforming existing social insurance schemes will have the degree of expertise sufficient to support the type of intricate dispute resolution procedures found in countries with mature social insurance systems. In the infancy of the reform, there are several options to establish dispute resolution mechanisms. One option is to vest the social insurance agency with the authority to result disputes with regard to eligibility, benefit computation, and continuation of benefits. Another option is to use special tribunals, which would then adjudicate disputes. Finally, another alternative is to require the hearing at the social insurance agency level and then permit appeals to the special-purpose tribunal.

Enforcement. There are enforcement challenges that impact the planning and implementing pension reform. Creating an enforcement capacity with the social insurance agency creates an institutional incentive to enforce the law and its rules and regulations. The social insurance agency must implement an audit function that meets the following goals:

- The pension law is being implemented in accordance with its terms;
- The policies of the government and the SIA are being complied with; and,

- The data processing and other functional responsibilities of all branches and instrumentalities of the social insurance agency are producing accurate results and effective service.

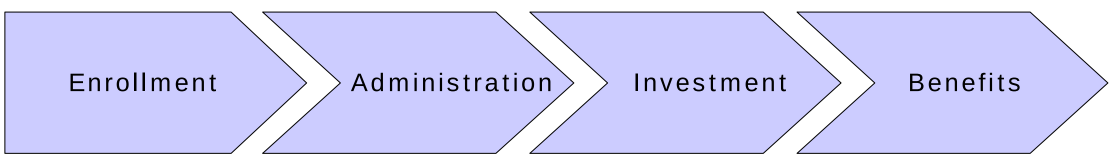
Pillar II and III implementation issues include*:*

Establishing New Pension Superintendent. In establishing the role of the pension superintendent, it is important to address the following implementation issues:

- Position of the pension superintendent within the government structure;
- Budget of the office of the pension superintendent;
- Extent of the pension superintendent's authority;
- Length of its appointment;
- Communication channels established between the pension superintendent and the pension fund; and
- Establishment of an audit process.

Rules for Pension Funds. Pension funds may be managed either by private pension funds managers or by the government (or government-sponsored organizations). It is important that a level playing field be created when establishing regulations (i.e., investment policy) regarding private and government-run pension funds.

The graphic below summarizes the essential functions of pension funds:



Enrollment	Administration	Investment	Benefits
• Educating • Communicating and marketing • Enrolling initial influx of participants to new system • Enrolling transferring participants	• Collecting contributions • Maintaining records • Issuing statements • Processing transfers • Client services including voice response systems and internet	• Choosing an investment manager • Overseeing investment	• Calculating and paying benefits and transfers • Co-ordinating with insurers

This section discusses the following implementation issues:

- Defining minimum requirements that licensed pension funds should perform.
- Defining the licensing process that ensures that pension funds will operate prudently and efficiently.
- Identifying the required reporting elements that must be transmitted by pension funds to the pension superintendent.

- Identifying ways for pension funds and the pension superintendent to efficiently operate.
- Identifying ways to ensure a competitive market such as ensuring a level playing field among pension fund administrators, or encouraging publication of information such pension fund fees or investment returns.

Contributions. The accuracy and timeliness of transmittal of contribution payments is important to the overall success of pension reform. There are two basic models for transmittal of contributions. The first model has the contributions directly transmitted from employers to licensed pension funds. The second model has all the contributions transmitted to a central collection source, which is responsible for tracking and monitoring collection contributions. This section ends with commonly asked questions regarding transmittal of contributions.

Benefit Payments. While pension fund administrators manage the accumulation of benefits, annuity and insurance companies are generally responsible for the benefit payments. The issues involved with benefit payments include:

- Developing a process for claiming benefits.
- Designing procedures and establishing benchmarks for various administrative transactions.
- Designing required reports.

Implementation of Guarantees. There are generally two types of guarantees specified by governments to smooth the transition from the old to the new system – interest rate and benefit guarantees. The Pension Superintendent must collect sufficient information (such as data on investment returns) from the pension fund administrators that allow adequate verification that participants are receiving these guarantees.

Investment Management. Many issues surround the regulation of investment policies of pension fund administrators. Governments must develop an investment policy. Governments generally stipulate investment policies for managing pension assets by defining allowable and prohibited investments in certain securities or real estate. Investment managers however decide on the number quality and type of assets purchased.

This section explores the issues involved in creating an investment policy. The investment policy must define the following: the range of investment by different types of assets, investment allocation limits within classification categories, limits on investments issued by one company or affiliated companies, offering of investment options, and quality rating standards. The Pension Fund Superintendent is responsible for regulating pension fund administrators, including monitoring compliance by tracking investments against the prescribed investment policy. Moreover, this section discusses the fees and charges associated with pension fund administrators and the use of a custodian for investment assets.

Communication with the Public. A clear and targeted communication campaign is essential to the success of pension reform. Developing successful public information campaigns involve the following steps:

- Identifying the potential audience of pension reform. It is important to understand that there are different target audiences and each has their own needs, expectations and challenges.
- Developing and executing targeted communications for each audience identified.
- Measuring the effectiveness of the communication campaign through surveys and focus groups.

SOCIAL INSURANCE, PENSIONS AND ECONOMIC BEHAVIOR

There are several major issues of economic behavior to be considered in the design of a public pension program. These include the following:

- The effects of mandatory contributions to social insurance schemes on private saving;
- The effects of the retirement age on labor market participation and, possibly, on saving; and
- The effects of income conditioning or means testing on labor market participation.

Each of these issues must be taken into account in the design of a pension program, whether public or private or defined-benefit or defined-contribution. The first affect funds available for capital formation to support and equip labor, while the other two affect the extent to which individuals participate in the labor market over their lifetimes. Each of these important topics is discussed in some detail in the Background Paper No. 1: Social Protection, Pensions and Economic Behavior of the Guidebook.

While the issues are complex and analysts can and do differ, the economic consequences of pension policies constrain the design of a public pension system in several ways:

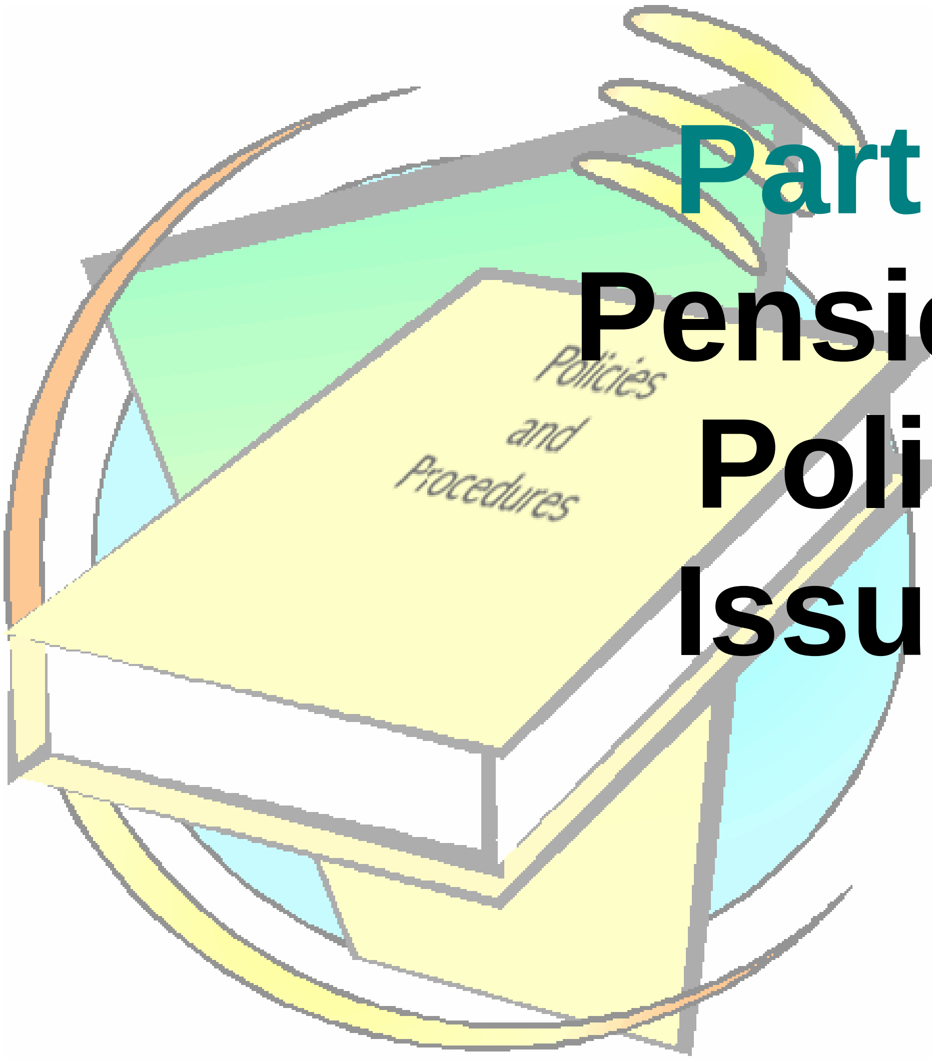
- Early retirement reduces the taxable resources that the government can use to provide the services of government, not just retirement benefits but all services.
- Means-testing may not only be politically unpopular, but it also reduces labor force participation with the same impact as early retirement.
- Finally, defined-benefit systems, whether PAYGO or fully-funded, reduce saving and thus the wealth of the nation and the rate of its economic development and long-run growth.

Avoiding these issues is not feasible, and their impacts must be considered in the design of the pension program and the public information campaign necessary to explain its benefit structure and the rationale.

PENSION AND CAPITAL MARKETS

Public and private pension systems play an indirect, but no less fundamental, role in market development through their effect on capital markets. At least where fully-funded insurance schemes operate--and, to a lesser extent, for partially-funded schemes--pension funds create demand for long-term savings instruments as mechanisms for preserving and increasing the value of workers' contributions to the funds. Pension funds make capital markets more liquid, lead to new instruments of risk management, and impose market discipline on corporate managers, all of which have strengthened capital markets in economies where pension fund and other institutional investment managers operate relatively freely in the marketplace.

A summary of the relationship between pension systems and capital market development and operations can be found in the *Guidebook* section Background Paper No. 2: Pensions and Capital Markets.



Part 2: Pension Policy Issues

INTRODUCTION

Why do social insurance programs exist? This question is especially appropriate now with the collapse of communism and the emergence of market-driven economies around the world. This brings increased reliance on the self, and less on the state, both in purchasing goods and services and in earning income.

This philosophy can extend beyond the provision of most goods and services to include safety net and social insurance activities. However, state welfare programs require the continued exercise of state power to redistribute revenue, from those with income to program beneficiaries. Moreover, almost all modern industrial nations have extensive social assistance programs of some kind, even those with deeply entrenched market economies.

Some argue that public social insurance programs make capitalism politically viable. Unfettered markets are efficient, highly productive, but potentially merciless towards those unable to compete. Although markets can provide insurance against some contingencies, such as old age and poor health, they might not provide enough insurance at affordable prices. If adverse selection – the tendency for people who are bad risks to oversubscribe to insurance programs – is severe, markets for certain types of contingencies might not form at all. Unable to purchase insurance, it would be difficult, if not impossible, for some people to protect themselves from the vagaries of the market.

Social programs assist in these situations. Therefore, the relevant question policymakers face is not whether to have such programs, but how much and in what form.

BASIC STRUCTURE OF A PENSION SYSTEM

Before getting into detail, it is best to understand the main features of a pension system.

- A pension system is a defined-benefit model, a defined-contribution model or a mixed model.
- Funding is either on a pay-as-you-go, fully-funded or partially-funded basis.
- Participation is either mandatory or voluntary.
- Multi-pillar pension systems combine these basic approaches.

This section explains these terms in detail and compares the alternatives. These basic pension system features can be combined in a variety of ways. The basic ways in which pension systems are structured are commonly referred to as “tiers” or “pillars”.

The following table illustrates the most common ways that pension systems can be organized.

Type	Pillar I: Mandatory PAYGO (or Partially Funded)	Pillar II: Mandatory, Funded Individual Accounts	Pillar III: Voluntary Private Pensions
Defined-Benefit	**Yes**	**No**	**Yes**
Defined-Contribution	**Yes**	**Yes**	**Yes**

Pension systems can be of a single type (defined-benefit or defined-contribution) and a single pillar, or they can be multi-pillar systems that combine elements of both basic types of systems. The various ways that these basic pension system elements can be combined are described in Combining Pillars and Types.

BENEFIT DESIGN

A Defined-Benefit System

In a defined-benefit system, the worker is promised a payment, expressed as a formula of benefits which is specified (or "defined") in detail. This benefit may be:

- A percentage of final earnings for each year of employment;
- A percentage of final average earnings (say over the last thee or five years of a worker's career) for each year of employment;
- A percentage of lifetime earnings;
- A fixed currency amount; or
- A fixed currency amount for each year of employment.

The contributions that are required to fund these benefits are determined. The total cost is then split between workers, employers and sometimes the government.

So, benefits are defined – contributions are calculated to arrive at the amount needed to pay the benefit. However, sometimes contributions are less than required to pay the future benefits that individuals accrue. Such a system is termed "underfunded" and is one of the prime motivating factors in pension reforms. This type of system is said to be "input driven".

A Defined-Contribution System

In a defined-contribution system, the contribution rate is defined, not the benefit. This is typically a percentage of taxable earnings (see Contribution Level and Contribution Base).

These contributions, made by the worker and/or the employer, are invested for the worker until s/he reaches retirement age. Both contributions and earnings are usually exempt from tax (see Tax Implications). The worker's retirement benefit is then determined as the amount of accumulated contributions and investment earnings. This lump sum is either paid out in full (and used to purchase an annuity) or converted to an annual pension.

In recent years a form of defined-contribution system in which contributions are not invested directly for the worker has been introduced in several countries. In these systems contributions are tracked in "notational" accounts, but the funds become part of government general revenues.

So contributions are defined – benefits are then calculated. This type of system is said to be "output driven".

The Two Systems Compared

The advantages of a defined-contribution system are:

- It is a relatively easy concept for people to understand since it works in much the same way as a bank account.
- As each worker's contributions are set aside for their own retirement, workers can be assured that there will be money for them when they do finally retire.
- Benefits are closely linked, in an obvious way, to contributions.
- Workers participate in their retirement account accumulation and regard the benefits as no longer a promise from a government official or politician.

The disadvantages of a defined-contribution system are:

- Redistribution of income is not automatic, since a worker's contributions are put into an account for his/her use upon retirement, disability, or death. Those who contribute more during their working lives receive higher benefits later. However, a defined-contribution system can offer a minimum pension benefit, which will redistribute income.
- A worker's final benefit depends heavily on the investment returns earned over his/her working lifetime. This can make future financial planning difficult, as a worker cannot know precisely, in advance, how much s/he will receive on retirement.

In contrast, the advantages of a defined-benefit are:

- A worker's promised final benefit is known precisely (or at least in relation to final salary).
- The system can be designed to redistribute income by helping some groups more than others. For example, income is typically redistributed from high-income people to low-income people, from men to women, and from young to old.

The disadvantages of a defined-benefit system are:

- A worker's contributions are not necessarily closely linked to his/her own benefits. Contributions typically go into a large trust fund, or into general revenues, and are not linked to the person who made the contribution. Benefits are defined by a formula, which may bear little or no relationship to the person's payment into the system.
- Since contributions under a defined-benefit system are generally pooled, a worker cannot be sure that there will be sufficient money to pay for his own retirement.
- The cost of the system will change with changing economic or demographic conditions. This means a change to workers' and employers' contributions, and/or a change to the government's liabilities. This can introduce instability and uncertainty into the system.
- Favorable economic and/or demographic changes (which lower the cost of the system) may not be passed onto workers in the form of higher benefits. Unfavorable changes will almost certainly be passed on in the form of higher contributions, or in the inability of the system to pay promised benefits.

FUNDING

Pay-As-You-Go

In almost all countries with unreformed pension systems, the existing, mandated systems are unfunded pay-as-you-go arrangements. Pay-As-You-Go, or PAYGO, is a generic term for pension systems whose costs are not amortized or financed in advance. Rather, the money necessary to fund the system each year is simply found during that year. Contributions from workers and/or employers alone are usually insufficient to pay for benefits, so the responsibility of financing the shortfall rests on the government, which will tax its citizens to cover this cost.

PAYGO systems face a number of problems:

- *Incentive to grant excessive benefits* – as future costs are not made explicit and may prove to be unaffordable.

- *Dependency on the government* – as money is not set aside each year for future retirees, their benefits depend on the future financial strength of the government. However, benefits are frequently manipulated by politicians who promise to pay more in exchange for securing votes or support from pensioners.
- *Higher ultimate costs* – as contributions are not invested, the benefit of compound interest is lost and more must be contributed.
- *Increased risk of contribution evasion* – as workers do not perceive a strong link between their contributions and their benefits.
- *Lack of development of capital markets* – as contributions are not invested.
- *Inequitable distribution of benefits* – as workers typically pay in more as contributions than they receive as benefits especially as the system matures.
- Intergenerational distribution – as current workers pay for current retirees rather than for their own retirement.

Fully-Funded

An alternative to the PAYGO system is a fully-funded system. Under this type of system, contributions from current workers and/or their employers are saved and invested to pay for those workers' retirement benefits when required in the future. This has the advantages of:

- *Making the system actuarially sound* – that is, expected payments from the system equal expected contributions into the system.
- *Providing better protection to future retirees* – from both demographic and economic shocks as money is set aside for them each year.
- *Encouraging workers to have a stake in capital markets* – nationally, regionally and internationally, thereby developing a greater self-interest in the global capital markets and leading them to support the inevitable shift to a shareholder society.

One disadvantage of a fully-funded system is that if contributions are invested, but not available at retirement – due to a poor investment policy, failure to permit diversification, failure to supervise the financial institutions, failure to properly license pension funds, etc. – the pensioner will receive no benefits.

By its very nature, a system of individual accounts must be funded in a consistent manner each year. Defined-contribution systems are usually funded while defined-benefit systems are often unfunded.

Partially-Funded

Under a partially-funded system, part of the system is unfunded while part is funded. It is also sometimes referred to a system of notional credits or notional accounts.

This has the advantages of:

- *Reducing the amount of pension debt* which must be financed in the change from PAYGO to funding;
- *Providing most of the benefits of a funded system* and limiting some of the disadvantages of an unfunded system; and
- *Allowing risk diversification.*

However, the unfunded portion of the system remains exposed to the problems of population aging and future financing.

PARTICIPATION

Mandatory

Virtually all countries have decided that social insurance for retirement, disability, and survivorship is a responsibility of government. Several reasons are often put forth to justify mandatory participation in these social security systems:

(a) *Markets will not provide sufficient protection from the unfortunate contingencies of life*. Market failure is caused by Adverse Selection. This means that the people who are most likely to collect benefits from a certain unfortunate event are the same people who will most demand insurance. As a result, insurance premiums must be higher than when everyone is equally at risk. Unless the provider of insurance can distinguish high-risk people from low-risk people, the low-risk people are priced out of the market. By mandating unilateral participation, the government increases the size of the risk pool to all workers in the country, thus decreasing the risk that adverse selection will occur and, in turn, reducing insurance premiums to economical levels.

(b) *A large, mandated system of social insurance is cost effective*. This is because insurance and annuity markets are complicated and are characterized by economies of scale, which means that average costs decline as more people participate in the system. This argument assumes that a public sector system is less expensive than private-sector alternatives and that a one-size-fits-all pension system is superior to one that allows more choice, but which is more expensive overall.

(c) *In many cases social insurance programs, in addition to providing protection against certain adverse contingencies, also redistribute income*. If the program were not compulsory, those who would not benefit from the system would opt out of it.

(d) *Most people are insufficiently far-sighted to prepare for their own retirements.* Although this argument is often put forward, most economists do not accept it because it implies that people are irrational, or at least, less inclined to look after their own well-being than would a remote government bureaucrat. Moreover, even if the proposition were true – and there is little evidence to suggest it is – some argue that people should decide such issues for themselves, even if they sometimes make mistakes.

There are advantages and disadvantages that are associated with the two general systems of social pensions – defined-benefit and defined-contribution. If they are mandatory, both systems solve the problem of adverse selection and reap the advantages of economies of scale. Both avoid the spillover costs of people who do not save for their own retirement. However, the two systems have different implications for income redistribution and for macroeconomic efficiency.

Mandatory systems frequently have additional, often negative, impacts on the larger economy. This is because they affect the saving and labor decisions of workers. The specific mechanisms of program-induced incentives differ widely across countries, but the general nature of these problems is fairly common.

Economists assume that spending and savings decisions are based on lifetime considerations. Workers save a portion of their income during their working lifetimes. After retirement, they live from their savings and accumulated earnings until they die, and bequeath what remains to their heirs. The theory is that even though income will vary substantially over a lifetime, consumption is smoothed out at a relatively stable level (click here to see a diagram of the life cycle theory of consumption[i]).

Initially, when individuals first enter the workforce or are in school, their earnings are relatively low. At this stage, individuals consume at a higher level than their income, and thus are dis-savers. They do this by borrowing, or by using another agent's (i.e., their parent's) resources. As individuals grow older and earn more income, they will consume less than they earn in order to set aside resources for their retirement. During this stage, the individuals are savers. When individuals finally retire, their income falls dramatically, although their consumption will remain at its relatively steady level. During retirement, individuals dis-save the resources they earlier set aside.

There are four main ways that a mandatory pension system may influence an individual's and a nation's savings patterns:

(a) Workers may view their contributions towards government-provided retirement benefits as part of their own savings, and, consequently, tend to save less on their own when the government taxes them for social insurance.

(b) If the social pension system in place is a PAYGO system, workers' contributions are used, in part, to fund the consumption of retired people, and are not used as investment in the nation's capital stock.

(c) Workers who wish to begin receiving system benefits must limit their participation in the labor force, by retiring earlier than they otherwise would have, or by limiting their amount of labor income. This may induce workers to save more during their shortened working lives in anticipation of their longer period of retirement.

(d) Similarly, a social insurance program can influence savings through its impact on bequests that people make to their heirs. If one reason for savings is to accumulate an inheritance, then people will take into account the impact of the public pension program on savings. If the public program redistributes income from young (workers) to old (retirees) then people would, presumably, save more so their bequests are not reduced by the public program.

Public pension programs also affect a country's macroeconomy by influencing workers' decisions in the labor market, especially those regarding earlier partial or full retirement.

The tax treatment of retirement benefits also affects labor supply decisions, as do specific characteristics of the benefit formula and other parameters of the tax code.

Voluntary

By contrast, voluntary participation is usually restricted to additional, personal savings.

People with disposable income will always find things to do with it, but in developing countries those things are often related to disposal rather than saving, and hence contrary to government objectives.

For example, in many developing countries people with income send their savings abroad for investment as opportunities within their own country are perceived to be high risk, to lack diversification as they are tied exclusively to the domestic economy and to provide insufficient flexibility and liquidity.

A well-structured voluntary savings or pension program (Individual Retirement Accounts – IRAs – in the United States are one example) which is designed to meet macroeconomic objectives will benefit both workers and the government by:

- Alleviating capital flight problems by allowing some international diversification. For example, by allowing an annuity savings fund to be invested up to 10 percent in high quality foreign markets, the government could end up with even more being invested in domestic markets than if all funds left the country illegally.
- Acting as an incentive for people to save and provide for their own needs.
- Acting as an incentive for savings and reinforcing confidence in the financial sector infrastructure, which complements the government's economic goals.
- Protecting workers' savings by having clear definitions and regulations on what institutions or savings products can be used and the strength of the companies that

provide such services, and by having strong oversight and supervision of the permitted voluntary pension programs.

Introducing such a savings or pension program may be a huge step for a developing country, however it can be done in stages:

(a) Initially, when there is little or no confidence in financial institutions, it may be better to set simple, easy to reach goals. This would include encouraging people to use the existing banking and capital market systems.

(b) As a next step, people should be encouraged to become educated about the different programs available and to be better equipped to take care of themselves financially. For example, the government could run a public education campaign. Alternatively, it could offer a tax incentive for the equivalent of five-year certificate of deposit, to be issued only by banks on the top tier list of the Central Bank, and publicize the benefits of investing in such an instrument.

(c) Finally, the government could permit international investment (within limits if necessary) and introduce different types of certificates with tax benefits.

By following a step-by-step approach, and allowing different products and tax incentives, the population is slowly exposed to tailor-made options designed for different target group needs.

COMBINING PILLARS AND TYPES

Pillar I Defined-Benefit System

Pillar I defined-benefit pensions systems have been the dominant form of social insurance for retirees in most developed economies and in the former communist systems. Though these systems vary considerably from country to country, the basic principal is that the government mandates contributions (typically from employers and employees) to the system and defines the benefits a pensioner will receive. Contributions are often, but not necessarily, in the form of a flat percentage tax on wages (payroll tax). Pension benefits are usually based on a formula that takes into account items such as years of covered employment, wage history and marital status. Benefits often bear little relation to contributions made over individuals' lifetime. Benefits are usually paid in the form of an annuity that may be indexed to changes in prices or wages.

Pillar I defined-benefit systems are relatively inexpensive to operate during the early years when there are few retirees relative to workers. However, as they mature, costs increase dramatically. In part because of their cost, the fact that benefits are not related to contributions, and the increased burden that PAYGO systems place on current and future workers, Pillar I defined-benefit systems have come under attack in recent years and many reforms are designed to replace them or minimize their overall importance.

Replacing a mature Pillar I defined-benefit pension system presents a number of political and practical problems that are discussed in subsequent sections of the *Guidebook.* Though reforms often seek to reduce the role of the Pillar I defined-benefit system, it is almost never fully replaced. These systems are usually kept at least to provide a minimum or guaranteed benefit to help lower income individuals.

Pillar I Defined-Contribution System

Pillar II defined-contribution systems are a relatively new form of public pensions. Under this approach, the government mandates contributions to the pension system. The government keeps track of individual contributions through what are usually called notational accounts. Individuals do not own the assets in the accounts and the actual contributions may be used to fund current governmental operations. In this sense, Pillar I defined-contribution plans are still PAYGO systems. However, the notational accounts are credited with some form of interest or earnings, usually defined in law. For example, the accounts may be indexed to wage or price growth.

When an individual retires, benefits are based on the balance in their notational account and their life expectancy. This benefit structure protects the system from both early retirements and changes in life expectancy over time. If an individual chooses to retire early, their monthly benefit will be reduced because their life expectancy will be longer. Similarly if life expectancy increases through, for example, improved health care, then individuals in the future would have to retire at a later age to receive the same level of benefits as current retirees. Sweden, Latvia, and the new system in Poland are models of a Pillar I defined-contribution approach.

Pillar II Defined-Contribution System

A Pillar II defined-contribution system is a mandatory pension system in which contributions are deposited in individual accounts. Contributions and account balances accumulate based on the way in which the funds are invested. At retirement, benefits are based on the accumulated balances in the accounts. Since it is a mandatory system, both eligibility for benefits and the form of the benefit are usually a matter of law. For example, individuals may be required to purchase an annuity with their accounts, or they may have the choice between an annuity and a lump-sum benefit.

In recent years, Pillar II defined-contribution systems have gained greatly in importance in pension reform. For example, the four basic pension reform options recommended by the World Bank in *Averting the Old Age Crisis* all rely on this approach as a key element of a multi-pillar pension system. Because these systems are mandatory and are expected to provide a major source of retirement income, extensive government regulation is almost essential. Regulations governing the funds usually involve broad information disclosure, solvency and licensing requirements, investment rules, backup insurance and establishment of a supervisory authority. Chile is seen as the original model for a Pillar II defined-contribution system but other countries such as Argentina, Bolivia, Kazakhstan, and Hungary have or are in the process of introducing this type of system as part of their reformed pension systems.

Pillar III Defined-Benefit System

A Pillar III defined-benefit system involves voluntary private pensions with defined benefits. Plans are usually occupationally based; that is, they are sponsored by employers, and are set up either voluntarily by employers or through collective bargaining. The pension benefit usually depends on years of service and some measure of a worker's salary over the last years of employment. Employees usually have to work for a specified number of years before they have a right – are vested – in the system. Employers often retain the right to terminate or convert accrued benefits to a defined-contribution scheme.

Since the plan is a defined-benefit, employers, rather than employees bear more of the risk, since they will be required to pay benefits without regard to how well investments have performed. On the other hand, employees bear risks as well. The employers' financial situation may make it impossible to pay benefits, the plan could be terminated, or the individual's wages could fall in years before retirement.

The plans may be fully-funded, partially-funded, or PAYGO. With certain major exceptions, most Pillar III defined-benefit systems in developed countries are close to fully funded. In developing countries, unregulated voluntary private pensions are mostly unfunded and pose serious financial risks to employees. Over time, significant regulations of Pillar III defined-benefit systems usually develop including actuarially sound funding of pension liabilities.

Pillar III Defined-Contribution System

In developed countries, voluntary defined-contribution systems have grown rapidly in recent years. These plans can be either occupational or personal savings plans. In the United States, many firms have converted their defined-benefit plans to defined-contribution plans. In addition, private tax preferred savings plans such as 401(k) plans or Individual Retirement Accounts (IRAs) have gained great popularity. Whether employer sponsored or personal, the principals are the same. Funds are deposited into private accounts, usually on a tax-deferred basis, and are available at retirement as defined in law. Often, individuals may "borrow" funds for approved purposes during their working careers paying the borrowed money back with interest over time. Individuals may also withdraw funds for other purposes, but must pay tax and significant penalties.

By definition, Pillar III defined-contribution plans are fully-funded. Financial institutions, insurance companies, or brokerage houses often administer them. Individuals may have options for investment of the funds but they are often limited to selecting between bond, equity, and money market funds. The risks to individuals are generally the opposite as for voluntary defined-benefit plans. The individual bears the risks related to investments, but bears less risk associated with corporate financial positions and plan termination.

These basic building blocks of a pension system can stand alone, or more commonly today, combined into a multi-pillar pension system. For a more detailed discussion see Multi-Pillar Models for Pension Reform or a Three Pillar System Example.

Goals of a Pension System

Saving for future retirement means forgoing income today. This is not something that either workers or government officials willing do. So pension systems must be designed to include incentives that will encourage workers to make contributions and participate in the system. Failure to adequately address the importance of incentives will greatly diminish the likelihood of pension reform success.

To determine the best use of incentives, it is necessary to first understand the behavior that the government seeks to achieve and reward as a result of the reform.

Social Goals

The social goals of a reformed pension system can include:

(a) Provision of adequate, minimum protection for individuals against economic hardship caused by factors beyond their control (such as longevity, disability and inflation risks);

(b) Redistribution of wealth to the lifetime very poor (without causing Intergenerational Distribution or Intragenerational Distribution). Unless this is deliberately targeted, the opposite will occur as the rich tend to work for fewer years (and so have lower total contributions), retire earlier, and live longer. This means that they receive higher benefits;

(c) Increased benefit replacement rate (without increased social taxes);

(d) Improved certainty that benefits due will be paid;

(e) Provision of similar benefits for individuals in similar circumstances. This is not as easy as it would seem at first. Should the focus be on the annual payment or on the total value of the pension? In New Zealand the life expectancy for a Maori is about six years less than for someone of European descent. The New Zealand Maori Council recently called for the retirement pension entitlement age for Maoris to be lowered so that they would enjoy the same average duration in retirement as non-Maoris.

(f) Simplicity and transparency to enable workers, citizens and policymakers to make informed decisions;

(g) Insulation from political manipulation that could lead to poor economic outcomes; and

(h) Provision of a system that enables those who can to save more than the mandated minimum.

ECONOMIC GOALS

The economic goals of a reformed pension system can include:

(a) Sustainability (expected revenues should cover expected payouts in the long run even after allowing for anticipated changes in demographic and economic conditions);

(b) Increased national savings;

(c) Decreased burden on national treasury;

(d) Decreased evasion of taxes by both workers and employers;

(e) Increased flow of investments into the capital markets;

(f) Assured flow of contribution revenue to purchase government bonds;

(g) Increased rate of return on investment portfolio without increased risk;

(h) Decreased risk of fluctuation of principal; and

(i) Decreased account fees paid by workers.

IDENTIFYING PROBLEMS

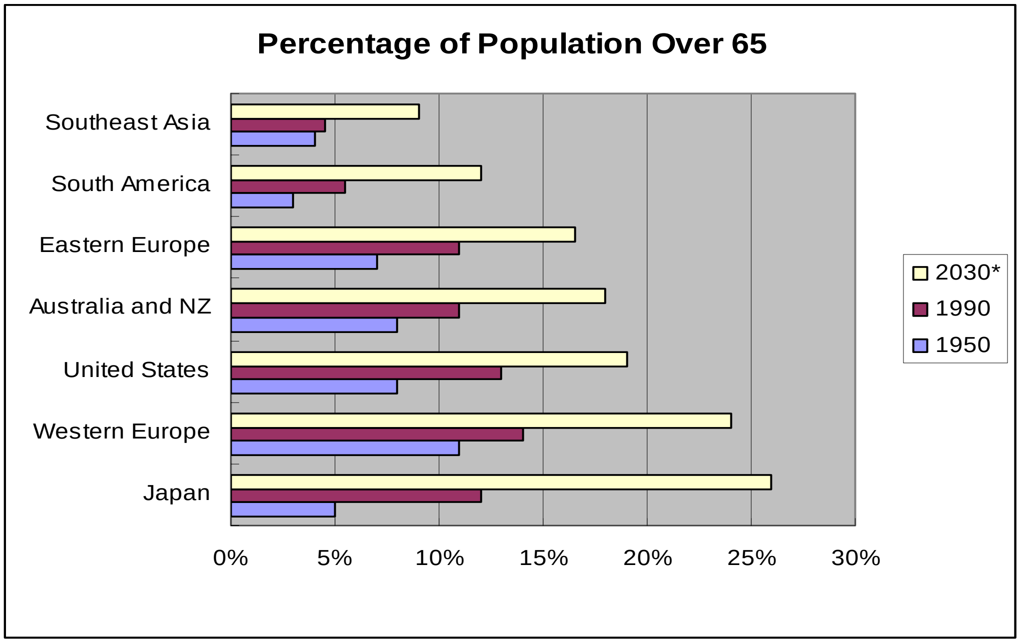
As countries all around the world begin to look at their pension systems, the same sort of problems are noted, namely:

- Demographic Shifts
- Contribution Evasion
- Overly Generous Benefits
- Economic Transition and/or Instability

DEMOGRAPHIC SHIFTS

Problem

The trend of the last 50 years is aging populations, which means there are fewer workers to support the high pension cost. Also, as medical advances are made and living conditions improve, workers have many more years of receiving benefits.



Source: KPMG. Global Pension Reform (1999). *Estimated

In middle-income countries like Mexico and Venezuela, the aging process is very rapid. Those countries will take only one-third to one-half as much time to experience the demographic aging that has already occurred in industrialized countries. In China, the one-child policy and substantial gains in longevity further exacerbate the situation.

In addition, countries in economic turmoil generally have high unemployment, which adds to the problem as less money is collected but more money is needed to allow the aging population to receive benefits.

These countries do not have much time to solve their problems. The only solution under the old PAYGO systems would be to further increase taxes, which is not a viable solution when taxes are already too high.

Solutions

Some ways of solving this problem in a reformed system are:

(a) Setting the retirement age to rise regularly with increases in the life expectancy;

(b) Penalizing workers who choose early retirement by reducing their benefits;

(c) Rewarding workers who choose to retire after normal retirement age by increasing their benefits in an actuarially fair manner;

(d) Encouraging workers to continue working once retired; and

(e) Not penalizing retirees who go back to work after they start to receive benefits.

CONTRIBUTION EVASION

Problem

In many developing countries, evasion is an important issue. Workers may avoid paying contributions for many reasons:

- They may see no connection between the contributions they pay and their resultant benefit.
- They may feel the contribution rate is too high relative to the benefit they will finally receive.
- They may value present consumption more than a future pension.
- They may believe they can invest their money at a higher rate elsewhere.
- They may expect to die relatively early and see no value in saving for the future.

A World Bank study showed that each 1 percent rise in the contribution rate typically led to a 2 percent drop in total contribution receipts due to increased evasion.

Workers may evade by:

- Escaping to the informal sector, or shadow economy. This accounts for more than half the labor force wages in some countries;
- Under-reporting earnings;
- Reclassifying earnings as fringe benefits, such as allowances that are not included in the contribution earnings base;
- Simply refusing to comply, which may have little consequence for them if enforcement is lax and penalties are low; and
- Delaying payment, which can be advantageous if inflation is high.

High levels of evasion can undermine a country's whole economy. Labor productivity suffers as people move to the shadow economy. The social security system runs into serious financial problems, especially if workers still qualify for benefits despite not having made contributions. This can then cause further problems as people's faith in the system is weakened and evasion increases.

Solutions

Some ways of solving this problem in a reformed system are:

(a) Demonstrating a strong link between contributions and benefits;

(b) In a defined benefit system, basing benefits on lifetime earnings to encourage people to make contributions;

(c) Paying lower benefits to people who have not contributed (this would occur automatically in a defined contribution system); and

(d) Reducing contribution rates, but expanding the earnings base and raising ceilings on taxable earnings.

OVERLY GENEROUS BENEFITS

Problem

One of the most acute problems that the Baltic States, Russia and other former Soviet Union countries face is the public welfare systems inherited from the Soviet period. These systems were designed to provide "cradle-to-grave" protection to the population.

Early retirement conditions were historically generous to compensate for the inadequacies of Soviet socialism. Soviet women endured long hours of work at home, so predominantly female occupations were awarded early retirement. Miners and many industrial workers suffered dangerous and unhealthy conditions so they too were given early retirement, though it would have been more socially efficient to improve working conditions and keep skilled workers at their jobs for longer. Further, invariably the higher ranks of the military receive higher benefits even though few of them actually see dangerous duty.

On the revenue side, these systems offered little encouragement to work and pay contributions. On the benefit side, they offered too much, for too many, too early.

For example, by 1994, one-sixth of the population in Kazakhstan was receiving a pension – or would have been if the government had met its obligations. Over 27 percent of the population were entitled to receive a pension or some other social assistance in 1996. Kazakhstan has one of the highest pension dependency ratios in the world, rivaled only by Argentina and Austria, both of which have much older populations.

Additionally many developing countries have indexed benefits to excessive levels. This has usually been a political response to calls for higher benefits or payment of benefit arrears. This has only exacerbated the problems.

Solutions

The systems are no longer sustainable. Some ways of solving this problem in a reformed system are:

(a) Setting benefits at a realistic level to protect people against poverty;

(b) Making benefits funded on a PAYGO basis relatively flat, means-tested, or a minimum pension guarantee;

(c) Indexing benefits to prices (rather than wages) so they retain their purchasing value over time;

(d) Raising the retirement age;

(e) Reducing opportunities and incentives for early retirement;

(f) Tightening the eligibility criteria for benefits; and

(g) Adding a bona fide disability system if none exists

ECONOMIC TRANSITION AND/OR INSTABILITY

Problem

Although public welfare systems are under scrutiny world-wide, the decision regarding the trade-off between spending on social security and investing in economic growth is particularly difficult in transition economies because of the fragility of their financial and social situation, and the pressures on expenditures resulting from economic transformation.

Most unreformed systems in transition economies, as well as industrial and developing countries, are managed on a PAYGO basis. As these systems mature, and contributions fall short of the amount required to pay benefits, the implicit public pension debt grows to such an extent that the systems are no longer sustainable and great uncertainty surrounds their future.

In most industrialized countries the public pension debt exceeds 100 percent of gross national product (GNP) and in some cases exceeds 200 percent. Even if initial cash flow requirements are low, PAYGO systems are building up hidden, irreversible debt that will require future taxes.

This is one of the main reasons countries seek to reform their pension systems.

Solutions

Some ways of solving this problem in a reformed system are:

(a) Increasing or eliminating any ceiling on taxable earnings for the calculation of contributions;

(b) Moving to partial- or full-funding;

(c) Investing the reserves of partially-funded schemes; and

(d) Keeping pension reserves separate from general government revenue.

TRENDS IN PENSION REFORM

Once the goals of the reformed system have been set, and the problems with the current system identified, it is time to begin designing the new, reformed system. In this section we look at what that has meant for the countries around the world that have already reformed their systems.

TRENDS

The trend in pension reforms around the world is to make the following changes:

- From Pay-As-You-Go to Full or Partial Funding
- From a Defined Benefit to a Defined Contribution System
- From Publicly Managed to Privately Managed

From Pay-As-You-Go to Full or Partial Funding

The first main change is from Pay-As-You-Go to a fully-funded or Partially-Funded system.

The advantages of this change are:

- The costs of the system are made clear up front so governments are not tempted to make promises today that they will be unable to keep tomorrow.
- A funded system provides transparency by explicitly distinguishing between the saving-insurance functions of a pension system and those of distribution and social protection.
- Under a PAYGO system, contribution rates are often high, changing contributions into "taxes" which reduces employment, and encourages evasion and movement into the shadow economy. By allowing workers to see that their contributions will be used for their own retirement, these trends can be reversed.
- Funded systems cause pools of money to be built up which are typically used to strengthen local equity markets and financial infrastructure.
- As benefits are pre-funded, the system is self-sustaining. Under a PAYGO system, as the system matures and contributions fall short of what is needed to pay benefits, the additional (often large) cost falls to the government, which builds uncertainty and unsustainability into the system.
- The political risk is lower as the ultimate pension benefits are a function of the accumulation of a worker's pension savings. Under a PAYGO system, workers' benefits are subject to the risk that the government, at the time of retirement, may be unwilling or unable to levy the taxes required to finance the earlier promised level of benefits. Also, an individual's own contributions pay for their own retirement.

From a Defined Benefit to a Defined Contribution System

The second change is from A Defined-Benefit System to A Defined-Contribution System.

The advantages of this change are:

- A defined-contribution system clearly demonstrates a direct link between the contributions made and the benefit ultimately received. This increases the likelihood of compliance. In contrast, a defined-benefit system is typically seen as payroll taxes that bear no relationship to the end benefits.
- Workers can see the value of their portfolio at all times and make judgements as to its adequacy. Under a defined-benefit system they know their ultimate end benefit but not whether there will be money to pay for it.
- Workers are encouraged to stay in the workforce and extend their working lifetimes as they see their benefits correspondingly increase.
- The system automatically adjusts to changes in average life expectancy when a worker's ultimate lump sum is converted to an annuity, allowance will be made for any improvement in mortality.
- The system is immunized from political interference as any promised special treatment must be followed by explicit additional contributions.
- There is an expectation that there will be higher rates of return on pension savings relative to what would be implicitly earned on contributions in a defined-benefit system.

From Publicly Managed to Privately Managed

Public systems are subject to political risks, and hence unstable, as future levels of contributions and benefits can be altered since no government can guarantee that subsequent governments will follow its policies. On the other hand, the state is seen as being inherently stable because it is perceived as being in perpetuity.

The primary advantage of the move to a privately managed system is to maximize the likelihood that economic – rather than political – objectives determine the investment strategy. The goal is to ensure the best allocation of capital and the highest return on savings, for the lowest risk. The available data, compiled by the World Bank, show that publicly managed funds earned less than privately managed funds through the 1980's, and in many cases lost money. This is largely because public managers were required to invest heavily or exclusively in government securities or loans to failing state enterprises. By contrast, privately managed funds are more likely to diversify their portfolios, and include international equities and bonds – thereby providing protection against inflation and other risks.

In addition, private management of pension funds can foster the development of financial markets within a country by creating demand for financial products and institutions.

When considered with the move from PAYGO to full funding, private management alleviates the fear that some people have about large amounts of capital being accumulated in the hands of a centralized public system subject to political pressures.

One argument raised against privately managed funds is that the administration costs are often higher than under a publicly managed system. While this has some validity, the investment returns, even when the administration costs are netted off, are still higher than those that would be earned under a public system.

A Three Pillar System Example

As noted above, the basic characteristics of a pension system can be combined in a number of ways. The system can be a single, mandatory, PAYGO defined-benefit system. More commonly today, reforms aim at introducing a multi-pillar approach. The multi-pillar approach can also be designed in a number of ways and no one way is best for every country. A country's particular circumstances including the maturity of their current system, the state of their capital markets and the realities of the public budget all affect what reformed structure may be appropriate. This section describes the characteristics of a common approach to a three-pillar pension system.

The three-pillar system separates the major objectives of social security into three pillars, each with its own source of funding. This system borrows components of both defined benefit and defined contribution systems. Virtually all existing social insurance programs include components of the three pillars, albeit in many forms and under many names.

The main characteristics of a typical three-pillar system are shown below.

	Pillar I	Pillar II	Pillar III
Participation	Mandatory	Mandatory	Voluntary
Goals	Redistribution and insurance	Savings and insurance	Savings and insurance
Funding	Pay-As-You-Go	Fully-Funded	Fully-Funded
Structure	A Defined-Benefit System	A Defined-Contribution System	A Defined-Contribution System
Management	Publicly managed	Privately managed	Privately managed

Pillar I

Pillar I addresses redistribution and social safety net issues directly, and provides basic support or insurance for everyone. In developing countries, "basic" support would typically mean subsistence-level assistance, whereas in developed countries it could mean assistance to provide at least a poverty-threshold standard of living. For example, in the United Kingdom this is defined as a flat-rate percentage of 14 percent of average national earnings for all workers. In Chile this is defined as a minimum pension guarantee for all workers.

Benefits can be universally provided, or means tested (see Benefit Design Issues). Obviously the former would be considerably more expensive than the latter.

Everyone in society participates, whether or not they have worked in the formal economy. In virtually all versions of this model, this pillar is publicly managed and funded from general revenues, because it is almost universally recognized that redistribution is best achieved through government intervention.

Few developing countries include the provisions of this first pillar in their current public social security systems. However, many developed countries use public insurance programs to redistribute income to low-wage earners.

Pillar II

Pillar II is the core of the three-pillar system, and it is here where versions of this system differ most from each other. The table below shows the pension systems in many countries around the world.

	Pillar I		Pillar II	
	Management	Type of Benefit	Management	Type of System
Australia	Public	Means tested pension	Private	Occupational defined-contribution
Netherlands Switzerland	Public	Flat pension	Private	Occupational defined-contribution
Singapore Malaysia	Public	Minimum pension	Public	Centralized defined-contribution
Chile Kazakhstan	Public	Minimum pension	Private	Personal defined-contribution
Argentina	Public	Flat pension	Private	Personal defined-contribution

Pillar II must be Mandatory for many reasons. These include the problems associated with Adverse Selection, economies of scale, paternalism and the free-riding by people who save too little during their working lives knowing that social programs will take care of them when they are old, whether or not they save.

Linking contributions to benefits is important to discourage tax evasion and to encourage labor force participation. Individuals are more likely to work in the formal sector and to pay their contributions when they perceive that these contributions are not a tax and bear directly on benefits to be received later. Those who avoid contributions – for example, by working in the informal sector or by retiring early – and those who evade their contributions – for example, by arranging with their employers not to pay legally mandated contributions – receive smaller benefits during retirement when contributions are linked to benefits. When there is no connection, as in a purely PAYGO system, a worker can pass program costs on to others.

The defined-contribution benefits can be provided through either personal plans – when workers are usually able to choose which fund they join – or through occupational plans – when a worker's employer chooses or establishes a pension fund.

Making this pillar fully funded also has advantages as discussed in From Pay-As-You-Go to Full or Partial Funding.

Privately managing the second pillar also has advantages as discussed in From Publicly Managed to Privately Managed.

Pillar III

Pillar III in almost all variations of this system is voluntary, fully-funded, defined-contribution, and privately managed. In some cases, such as in Chile and the United Kingdom, this pillar is a part of the public system. In other cases, such as the United States, the popular 401(k) plans are Pillar III plans that complement the public system, but are separate from it. It should be noted that Pillar III pensions do not need to be of the defined-contribution type. Traditional voluntary private pensions systems were often defined-benefit plans, often negotiated between management and labor. In the United States, many of these plans still exist and are strongly supported by workers.

In many countries there are occupational pension plans, other retirement savings vehicles (such as company-sponsored, tax-deferred, retirement savings plans), individual retirement accounts, and other retirement savings vehicles. In some cases contributions are given favorable tax treatment (see Tax Implications).

A Typical Reform Example

Many reformed systems now follow A Three Pillar System. Under a typical old system, contributions to the welfare system were 25 percent of salary – 20 percent coming from employers and 5 percent from workers. These were contributions that went into the Pillar I – a mandatory, publicly managed, defined-benefit system. No contributions went to Pillar II and Pillar III. On reaching retirement, most workers received a benefit of equivalent to, or less than, 60 percent of final average salary.

	Pillar I	Pillar II	Pillar III
Contributions			
Old System	25% total 20% from employer 5% from worker		
Benefits			
Old System	100% of minimum wage About 60% of final average salary		

Consider now a typical reformed system.

	Pillar I	Pillar II	Pillar III
CONTRIBUTIONS			
New system	15% total 10% from employer 5% from worker	10% total 5% from employer 5% from worker	0-10%
BENEFITS			
New system	15% of final average salary	45-65% of final average salary	0-50% of final average salary

Except for voluntary contributions to Pillar III, the new design generates greater benefits without increasing contributions. Instead contributions are redirected from Pillar I exclusively to Pillar I and II. A new Pillar II – a mandatory, privately managed, Defined-Contribution system – and a new Pillar III – a voluntary, privately managed, defined-contribution system – are introduced.

Contributions to Pillar I are reduced to 15 percent of salary – 10 percent coming from employers and 5 percent from workers. As a balance, contributions to the new Pillar II are increased to 10 percent – 5 percent coming from employers and 5 percent from workers. This 5 percent from workers could initially be financed by way of a 5 percent salary increase since employers' overall contributions have reduced by 5 percent.

In addition, workers (and, in some countries, employers) are permitted to make voluntary contributions to Pillar III of an additional 10 percent of wages.

Workers' end benefits are significantly increased. They can now expect over 100 percent of final average salary – 15 percent from Pillar I, 45 percent to 65 percent from Pillar II and 0 percent to 50 percent from Pillar III.

Reforming a Pension System

In designing a new or reformed pension system, many questions need to be answered to ensure that the resultant system meets the desired goals and has no negative social or economic effects. These questions cover:

- Coverage and Eligibility
- Benefit Structure
- Contributions
- Retirement Age
- Management
- Issues in a Defined-Contribution System
- Issues in a Defined-Benefit System
- Disclosure

Coverage and Eligibility

Questions concerning coverage and eligibility include:

- Should participation be mandatory or voluntary?
  (see Participation)
- Who should be covered – all workers? Self-employed? Small businesses?
- How should married people be treated relative to single people?

Benefit Structure

Questions concerning the benefit structure include:

- Benefit design features beyond whether a benefit is of a defined-benefit, a defined-contribution, or a mixed type? Should benefits be flat, means tested or employment related? How should benefits be indexed to account for changes in productivity of purchasing power over time?
  (see Benefit Design Issues)
- What average replacement rate is appropriate and affordable?
  (see Target Replacement Rate)
- On what events should benefits become payable?
  (see Specifying Events Leading to Benefit Payments)
- Should guarantees be offered?
  (see Guarantees)
- Should benefits be indexed to wages or prices?
  (see Indexation)
- Should benefits be taxed? (see Tax Implications)

Benefit Design Issues

Flat or Means-Tested Benefits

This issue primarily affects defined benefit systems, since under a defined contribution system pensioners have property rights to their own accumulated contributions.

Under a flat benefit structure, the same benefit is paid to everyone regardless of their income or work history. This has the advantage of requiring minimal record keeping and thus administrative costs are kept to a minimum. Also, a basic minimum benefit is provided to the elderly, which can be politically popular.

A disadvantage is that this type of system costs more, which means contributions, or taxes, must be higher. Higher taxes act as an incentive for individuals to find ways to avoid or evade them. Without an incentive to properly report their full income – as all workers' benefits are equal regardless of wage earning level – those with higher incomes are not motivated to honestly report and pay taxes/contributions on their higher income levels.

Although this method seems to provide the advantage of ensuring minimal benefits, the effects on the national economy of creating incentives for contribution evasion outweigh the desired benefits. Since other methods permit a minimum benefit payment, this benefit design does not seem worth the higher cost.

In Japan, South Africa, Canada, and New Zealand the social security system provides flat benefits.

Under a means-tested benefit structure, benefits are reduced if other income – usually labor income – is above a specified level. Means-testing is a different issue to taxing all or part of a retirement benefit, but in combination with taxation, the reduction can be a large fraction of earned income. Means-testing is most successful when used in a mixed system, and the means-tested benefit comes from the defined benefit component of that system.

The social security in Australia is both means- and asset-tested.

The main advantages of means-tested systems are that the overall cost of the system is lower, or larger benefits can be paid out for the same expenditure. They also prevent the rich from collecting larger lifetime transfers than the poor.

Means tested systems have some disadvantages, however:

- They can have higher administrative costs;
- There can be stigma and take-up problems with people drawing benefits;

- People can be encouraged not to save when young or work when old and near the income threshold; and
- They are politically unpopular in times of budgetary stringency since middle-income groups do not benefit.

Employment Related Benefits

Another option under a defined benefit system is to provide benefits calculated as a percentage of earnings for each year of employment. This system:

- Costs less;
- Requires more record keeping;
- Disadvantages women (who tend to work for fewer years); and
- Is more likely to be successful in deterring evasion (as people only receive a benefit for the years they have worked and contributed).

Care must be taken, though, to ensure that the benefits:

- Are not unsustainably high;
- Do not go disproportionately to high-income earners; and
- Do not encourage early retirement or strategic manipulation.

Indexation

Most countries index their pensions to either wages or prices.

Under price indexation, pensions are adjusted with price levels. This means:

- Their absolute real value remains unchanged;
- The risk of changes in the standard of living is borne by the young whose contribution rates would need to increase if the economy slowed; and
- The elderly do not share in any productivity growth that occurs after they retire.

The argument in favor of price indexation is that old people are less able to adapt to falling real incomes than young people are, and are less concerned about rising real income since their consumption habits are already established.

Under wage indexation, pensions move with changes in wages. The argument for wage indexation is that young people should not be expected to bear the full brunt of drops in real per-capita income, and that the elderly should share in the fruits of any economic growth. Wage indexation:

- Helps keep pensions equal for all beneficiaries (as benefits are usually linked to wages); and

- Makes the system resilient to external shocks that affect wages as both inputs (contributions) and outputs (benefits) are usually linked to wages.

When productivity is rising, wage indexation holds the required contribution rate constant if all else remains unchanged, while price indexation allows the contribution rate to fall.

If people care about both their relative and absolute positions, while the government wants to capture some savings from productivity growth, one successful solution is a fifty-fifty combination of wage and price indexation, as practiced in Switzerland.

Changes to Earnings

Defined-benefit systems based on final earnings have to allow for the possibility of a worker's earnings falling near retirement. This can happen for business reasons (such as working part-time or changing career) or personal reasons (such as illness).

Solutions to this problem are to:

- Adjust the service or employment period (so that, for example each year worked part-time counts as half a year) and use an adjusted full-time equivalent salary;
- Use lifetime earnings rather than final earnings; or
- Use the highest three or five-year average annual earnings over the worker's lifetime, adjusting past earnings to the retirement date with average wage inflation.

Target Replacement Rate

If a person's replacement rate is too low, they may become a burden on society. If it is too high, contributions will need to be high to support it and people will be encouraged to retire early. But how low is "too low" and how high is "too high"?

A growing consensus worldwide, supported by the efforts of the World Bank, indicates a replacement rate of around 75 percent of average lifetime wage, or 50 percent of final wage, is reasonable. Each person's required replacement rate will be different depending on his/her circumstances and preferences. Such a level should allow a comfortable standard of living for a high-income household but would be near subsistence for a low-income household.

In addition to simply comparing a worker's pension with his/her pre-retirement earnings, it is also necessary to consider the relationship between benefits and contributions. High-income workers, whose pension is, for example, 50 percent of final earnings, may consider that this will provide them with an adequate income in retirement, but they would probably not be satisfied when their pension is considered in terms of the benefits to contributions ratio.

It is much harder to specify a replacement rate in a defined-contribution system than in a defined-benefit system. This is because the amount of the final benefit is not defined as a matter of principle and depends heavily on the investment return earned during an individual's working lifetime. Despite this, though, many countries impose a minimum replacement rate on their defined-contribution systems in order to limit the uncertainties associated with such systems. See Guarantees for more details about guarantees offered in defined-contribution systems.

Click to see a table showing the average replacement rates in various countries[ii].

Specifying Events Leading to Benefit Payments

The following events usually lead to benefit payments:

(a) *The participant reaching retirement age*. This is usually defined as:
- A certain age,
- A certain number of years of service, or
- A combination of age and years of service.

(b) *The participant qualifying for early retirement*. This can be defined as either:
- A certain age,
- A certain number of years of service,
- A combination of both, or
- A certain account balance – Examples[iii].

(c) *The death of a participant or current pensioner*.

(d) *The participant becoming totally and permanently disabled*. This event must be coordinated with the arrangements for workers' compensation benefits, and any state paid disability benefits.

(e) *The participant permanently leaving the country*. Some countries permit workers to take the full balance of their account if they are permanently leaving the country, but since claiming this benefit can be subject to widespread fraud, it is not advisable. The only waiver that should be considered is that if any minimum balance requirement has been met and the worker is permanently leaving the country, then that worker could take his/her money. It would be reasonable to delay introducing this option until the reform has been underway for a few years.

(f) *The participant suffering financial hardship*. This option needs to be carefully considered. The idea is not to reward financial failures but rather to allow the very poor (whose mandatory savings will probably not be sufficient to cover the minimum benefit anyway) to survive to retirement age if there is no social welfare system in place, or if social welfare is inadequate.

(g) *The participant transferring to another pension fund*.

Guarantees

The most important thing to remember about guarantees is that they cost money. If the government provides guarantees, it is the taxpayers and participants who ultimately must pay for them, regardless of whether or not they actually benefit from the guarantee.

There are two typical guarantees specified by governments to smooth the transition from the old to the new system – interest rate and benefit guarantees, with interest rate guarantees falling into two types.

Minimum Rate of Return

This involves the government requiring each pension fund to guarantee that the rate of return credited to each worker's account will be at least equal to some minimum rate, such as the government bond rate. This is only relevant in a defined contribution system.

The comparison between the fund's return and the minimum rate should be made over a rolling period (say 12 or 24 months) to discourage "short-termism". The aim would be to have the minimum rate at least equal to the inflation (or similar) rate so workers' savings maintain their real value.

Minimum and Maximum Rate of Return

This involves the government requiring each pension fund to guarantee that the rate of return credited to each worker's account will fall within a band. The "band" is usually half of the average of all the licensed pension funds' actual investment returns in a month, calculated using a rolling period (12 or 24 months). This is only relevant in a defined-contribution system.

Pension funds that earn their participants a rate exceeding the band are not permitted to credit the full earnings to the participants' accounts. Pension funds whose earnings rate falls below the band must make up for that difference (usually drawing on their reserves of a pool into which excess earnings from previous months may have been credited).

Minimum Benefit

This involves the government guaranteeing that all workers will receive a pension equal to at least some defined minimum amount.

Advantages and Disadvantages

The advantages and disadvantages of each of these guarantees is shown below:

Guarantee	Advantages	Disadvantages
Minimum rate of return	▪ Workers can be assured that their retirement savings will keep pace with inflation, but only if the minimum rate is tied to the rate of inflation.	▪ The guarantee costs money. The fund will need to reserve, or take out insurance, for times when its investment portfolio's actual return is below the minimum rate. This will ultimately be passed onto participants in the form of higher fees that erode the account balance. ▪ The guarantee can have a negative impact on market performance in the long-term (see Minimum Interest Rate Guarantees).
Minimum and maximum rate of return	▪ Workers need not watch investment returns too closely as they can rest assured that their fund would not perform significantly differently to other funds. ▪ Workers are not encouraged to change funds regularly, chasing the best returns.	▪ The guarantee costs money. The fund will need to reserve, or take out insurance, for times when its investment portfolio's actual return is below the minimum rate. This will ultimately be passed onto participants in the form of higher fees that erode the account balance. ▪ There is no reward for funds that perform well. ▪ As a result, funds tend to cluster together, investing in similar portfolios and tracking the major funds' movements. ▪ Workers are not encouraged to become financial aware. ▪ The guarantee is based on the assumption that one investment portfolio suits all workers. ▪ The upper return that workers could earn is restricted.
Minimum benefit	▪ Workers who are unable to save sufficiently for their own retirement can rest assured that they will at least have sufficient money to live on in their old age.	▪ The guarantee costs money. All taxpayers will need to pay for it regardless of whether or not they benefit from receiving it. ▪ Workers can evade the system during their working lifetime, but still be assured of having sufficient money in their old age.

An alternative to the minimum and maximum rate of return guarantee is to restrict the way that funds publish and advertise investment returns to, say, annual rates. This has the advantage of discouraging "rate chasing", while having none of the disadvantages of a minimum and maximum guarantee.

If guarantees must be put into place to achieve some form of political compromise, it is best to limit their use to the first few years of a reform, say two or five years.

Perhaps the best guarantee that a government can provide is strong supervision that enforces the pension law. The law must balance the need for flexibility with financial safety, and must adapt to changing circumstances.

As a minimum, the government should implement adequate safeguards to ensure that the system – when properly followed – is protected against fraud and theft, and require errors and omission insurance, and fidelity bonding, for situations when the system's safeguards do not protect against these crimes.

CONTRIBUTIONS

Questions concerning contributions include:

- What sorts of contributions should be permitted?
  (see Types of Contributions)
- What rate is appropriate?
  (see Contribution Level)
- Should the rate be the same for all workers?
- On what earnings basis should contributions be determined?
  (see Contribution Base)
- Should contributions be taxed?
  (see Tax Implications)
- How should contributions be collected?
  (see Contribution Collection: Centralized Versus Direct Transmittal)
- How quickly should contributions vest?
  (see Vesting)

Types of Contributions

The common types of contributions are:

Common Name	Obligation to Finance
Worker mandatory	Worker
Worker voluntary	Worker
Employer mandatory	Employer
Employer voluntary	Employer

Contribution Level

According to the World Bank, countries with older populations should expect to spend about 20 percent of their wage bill on old age security arrangements. This would be split between Pillars I and II as 10 percent-10 percent if Pillar I provides a flat benefit, or 4 percent to 16 percent if Pillar I provides a minimum pension guarantee. If Pillar I provides a means-tested benefit, the split would be somewhere in between depending on whether the means test is broad or narrow.

Click to see a graph showing the level of contributions in various countries[iv].

Contribution Base

Contributions to a pension system are usually not based on a worker's full income. This is because it is not fair to require high-income people to contribute the same percentage of pay as low-income people as they do not need to save as much in a defined contribution system, nor will they receive a benefit commensurate with their contributions in a defined benefit system.

Hong Kong's new mandatory provident fund arrangement intends to use a very broad definition of earnings. It includes all cash earnings, including salary, wages, bonuses, allowances, overtime, etc., but excluding housing allowances. This is a very different definition to what most employers are currently using for their own pension schemes, and what is used in most other developed countries' systems. Such a broad definition is used to prevent employers minimizing their contributions by redefining a large part of workers' wages as allowances.

As well as defining the contribution base, it is common to put both upper and lower limits on earnings for the purposes of determining contributions. For example, under Hong Kong's new arrangement contributions need only be made for salary up to

HK$20,000 per month. Workers earning less than HK$4,000 need not make their five percent contributions, however the five percent employer contributions are still required. These limits will be assessed on a monthly basis. Australia and the United States have similar limits for their respective Superannuation Guarantee Charge and Social Security System contributions.

The use of different wages bases in Venezuela illustrates the problems associated with calculating contributions on a portion of workers' wages. Over time, the system in Venezuela has expanded so that contributions are made on only about 50 percent of average worker wages. Increases to the minimum wage, union concessions for increased benefit payments and a variety of other political compromises have resulted in the use of one wage base for contributions to the national pension and medical systems, and another amount on which no benefits are factored.

Tax Implications

Contributions are either taxable or tax-deferred at the time they are made. The tax position on contributions affects the tax position on investment earnings and benefits.

In the United States, a distinction is made between income that is "tax-exempt" (that is, income that will never, ever be taxed – such as income earned from a government bond) and "tax-deferred" (that is, income that the taxpayer does not pay taxes on now, but does later). It is rare for contributions, investment income and/or benefits in a pension system to be totally tax-exempt, but not impossible.

Click to see a table showing how different countries tax retirement savings[v].

Tax-Deferred

Generally, mandated worker contributions are not taxed as ordinary income to workers at the time they are made. This means that the worker will not pay taxes to the government on these contributions and that the workers' net income is all that is taxed.

In this case, the investment earnings on these contributions usually accumulate on a tax-deferred basis. At benefit payment mode, however, these amounts are taxable when paid out.

Governments offer these exemptions/deferments as an incentive for people to make contributions, and because there is a general acceptance worldwide that if a worker has no access to use certain money, then to tax them on it seems wholly unfair. In fact, though, historical trends indicate that the percentage of taxes levied against workers' wages increases gradually each year. Workers actually may be more favorably taxed at the time wages are earned (if taxes are low) than to defer to a later time when tax percentages have increased higher.

Taxable

Under this scenario, amounts contributed to a pension fund are taxed, whether the worker or an employer makes them. Generally these amounts are not taxed at the time of withdrawal.

It is common for voluntary contributions above certain limits to be taxed. While governments want to encourage saving for retirement, they do not want to lose too much in tax revenue. The rationale is that only the wealthy can afford high levels of voluntary pension savings and these programs can become magnets for criticism of tax breaks and larger pension benefits to the wealthy.

Setting a tax-free limit of 10 percent of earnings for voluntary contributions is common.

When to Tax

To tax both at the time of contribution and at the time of withdrawal is generally considered double taxation and doing so only adds to the reasons to evade for both workers and enterprises. Double taxation is universally regarded as unfair even if the government can show the same amount is being collected in total. Governments are better off imposing a higher tax once than to tax the same amount twice.

Vesting

Vesting is the term used to describe when a worker becomes fully entitled to his/her own, and employer's, contributions. In most mandatory pension systems, workers immediately have vested rights to all the contributions made in their name – both by them and their employer. This is not so in many occupational funds, where full vesting in the employer's contributions may accrue over five years or even 10 years.

In some countries the vesting applies to each contribution (e.g., one year aging for each employer-funded contribution). In other situations, the employee vests (e.g., once an employee has gained ownership to contributions, all contributions going forward will be fully invested as well).

In the United States, the mandatory vesting period for employer-sponsored funds is defined in three ways:

- If there are restrictions on who can join the fund, then employer-funded contributions generally vest immediately.

- If there is a delay between the time an employee starts work and contributions start being made for him/her, then the length of time in which contributions must vest has an inverse relationship to the delay. For example, an employee who must wait three years for employer-funded contributions to commence must be fully vested immediately. The inverse is true – when employer-funded contributions commence immediately following employment, a vesting schedule of up to three years may be applied against the contributions.
- If the fund vests employer-funded contributions over a period (not to exceed three years), then either employees must have contributions made for them from the day they start work, or all groups of employees (both highly compensated and those lesser compensated) must have contributions made on their behalf.

RETIREMENT AGE

The age at which workers can begin to collect pensions must be addressed in the policies:

- What should it be? (see Choosing a Retirement Age)
- How should it rise with increases in the life expectancy?
- How can rewards for early retirement, and penalties for late retirement, be avoided?
- What impact will the chosen age have on different income, ethnic and gender groups?

Choosing a Retirement Age

In most developed countries, the retirement age fifty years ago was age 65. Life expectancy then was around 10 years at retirement. Although male life expectancy has increased since then (by four years, for example in Australia), the majority of retirees today are female and they can expect to live 20 years or more in retirement. It is likely that advances in medical science will mean that people live even longer in retirement in the future.

Failure to develop a clear method by which retirement age can be modified has been a leading cause of many countries' pension systems becoming financially unsustainable. It is advisable to build in a method to deal with future changes at the stage of reform.

While people are living longer, they are also retiring earlier. Furthermore, there is also no longer a clear demarcation between employment and retirement. Many people simply wind down their work efforts rather than stopping work on a fixed date. In Australia, for example, 78 percent of males and 87 percent of females have retired prior to the statutory retirement ages (ages 65 and 60, respectively).

Permitting gradual retirement has many benefits:

- It enables older people to stay in employment for longer and thus eases the burden on the pension system;
- It allows people to adjust their work habits in line with their capabilities and stamina as they age; and
- It provides a more gentle way of easing people into retirement and thus reduces the supposed “pension shock” from too rapid a transition.

In choosing an appropriate retirement age, the following principles should be borne in mind:

- Avoid excessively long retirement periods.
- Do not penalize late retirees.
- Reduce pensions, on an actuarially fair basis, for people who retire early.
- Set the same retirement ages for men and women.
- Eliminate special retirement conditions for privileged groups.
- Do not use retirement as a remedy for unemployment.
- Raise the retirement age as the average life expectancy increases.

MANAGEMENT

One of the most striking changes brought about by the pension reforms in Latin America is the use of non-government entities to manage pensions. While this is not the ideal situation for all countries, it is an enormously popular choice because of the variety of options it brings – improved quality of services and improved government control.

When private pension companies are allowed to operate, the government maintains control through designing the system and through its role as the superintendent of the licensed pension companies, but turns the daily management over to experienced professionals. By doing this:

(a) The government retains control as it can revoke a firm’s license to operate.

(b) Inter-agency contradictions do not occur. If one government agency is performing the day-to-day operations of the pension system, and another is regulating and monitoring the system, it can be difficult to enforce compliance. If, however, private firms are responsible for the day-to-day operations, the government can perform its role of enforcing compliance.

(c) Workers can be granted right of choice. When a worker is permitted to choose which entity manages his/her pension savings, there is an opportunity to allow market forces to assist in maintaining standards and driving improvements and innovations.

Policies must answer the following questions:

- Should the system be publicly or privately managed?
  (see From Publicly Managed to Privately Managed)

If the system, or part of the system, is to managed privately, additional questions include:

- How should the system be supervised?
  (see Structuring the Regulatory Oversight)
- How should pension funds be chosen?
  (see Defining Minimum Requirements of Licensed Funds)
- Should government funds be permitted?
  (see Private and Public Pension Funds)
- What level of fees should be charged by pension funds?
  (see Fees and Charges)

ISSUES IN A DEFINED-CONTRIBUTION SYSTEM

Policies must answer the following questions if the system is to be wholly or partly defined contribution:

- How should the assets be invested?
  (see Developing an Investment Policy)
- Should workers be allowed to choose how their money is invested?
  (see Offering Investment Choice)
- How should investment managers be selected?
  (see Investment Management)
- What penalties should be imposed for poor performance?
  (see Performance Penalties)
- What level of fees should investment managers be permitted to charge?
  (see Charging Fees)
- Should custodians be used?
  (see Using a Custodian)

Performance Penalties

Rather than imposing penalties on funds that perform badly is to allow workers to leave one fund and go to another if they are dissatisfied. This makes workers their own policemen and funds accountable to the very people who have a vested interest in their success.

To facilitate this, investment performance should be reported in a standard format so workers can easily compare the various funds. All funds should use the same calculation to determine their earning rate and the rate should be expressed net of all fees due to the fund.

Further, funds should only be permitted to publish 12-month rolling average earning rates (once they have been operating for more than one year). As time progresses, there should be a mandated requirement that funds report one, three- and five-year returns, as possible. This emphasizes the importance of having a long-term perspective and encourages both funds and workers to focus on long-term performance, which is most applicable to retirement savings.

ISSUES IN A DEFINED-BENEFIT SYSTEM

Questions specifically relevant if the system is to be wholly or partly defined-benefit include:

- How should the system be assessed?
  (see Valuing the System)
- Who should be licensed as an actuary?
  (see Defining an Actuary)

Valuing the System

Under a defined-benefit system, while workers' final benefits are known, the required contribution rate(s) must be calculated. This is done by balancing expected income and outgo:

Expected contributions from workers, employers and/or government	+	Accumulated assets (if any)	=	Expected benefit payments and expenses

In order to calculate these expected values, assumptions must be made about each of the following items both currently and in each year in the future:

- The size of the working population;
- The number of pensioners;
- Mortality rates;
- Birth rates;
- Disability rates;
- The number of people emigrating and immigrating;
- Retirement rates;
- Salary levels;
- Pension benefit levels;
- Rates of investment return
- Rates of salary inflation;
- Rates of benefit indexation;
- Taxation rates; and
- Expenses.

These calculations are done by an actuary (see Defining an Actuary). The complexity of the valuation should not be understated – as shown above, it requires the application of assumptions and probabilities to future contingent payments and events. An actuary's uniqueness lies in his/her use of judgement and a combination of mathematical, statistical, demographics, economic, financial, analytical and modeling skills.

Governments typically regulate the method by which an actuary must value the system to protect the workers' interests and limit the amount of income on which tax is deferred (see Tax Implications).

Defining an Actuary

An actuary is usually defined as a Fellow (or fully qualified member) of one of the recognized actuarial organizations, for example:

- The Faculty of Actuaries or the Institute of Actuaries in the United Kingdom;
- The Society of Actuaries or the American Association of Pension Actuaries in the United States;
- The Institute of Actuaries of Australia; and
- The Canadian Institute of Actuaries.

In addition, the International Actuarial Association organizes world-wide activities for actuaries.

The actuarial profession has expertise in life, general and health insurance, pensions, investment and finance. In these, and increasingly in other fields, actuaries produce practical solutions to problems involving the impact of uncertain events, often in the distant future, on assets, liabilities or revenue flows.

These organizations represents the actuarial profession in their respective countries and are committed to promoting the profession and creating, expanding and maintaining an environment where the skills of actuaries are widely used and valued. Specifically they:

- Provide education, encourage continuing professional development, promote research and foster the advancement of actuarial science;
- Set and enforce professional standards and a code of conduct which embody integrity, expertise and relevance;

- Provide professional accreditation for the protection of the public; and
- Provide advice on the development and implementation of public policy.

DISCLOSURE

Finally, the information that should be disclosed to participants must be decided (see Participant Information).

COMBINING THE OLD AND NEW SYSTEMS

When a country's pension system is reformed, the decision must be made whether to give workers a choice between the two systems or whether to make the new system mandatory. This issue is discussed in Participation. In some countries, Hungary for example, there are constitutional stipulations that cannot be countered and/or political objections that are too volatile to overcome, through a mandatory reform. In these cases, workers must be given a choice of staying in the old system or joining the new system. Even in a voluntary transition, however, the government can seek to counteract confusion and political attacks through a massive educational communication plan.

METHODS OF TRANSITION

In either case, workers who join the new system must somehow be credited for their prior service under the old system. This can be done in a number of ways.

Run Two Systems

This involves maintaining the old system of benefits. When a worker finally retires, the benefit from the old system is calculated based on his/her service to the date of change. In addition s/he receives a benefit from the new system based on his/her service from the date of change to retirement.

This option was used in Kazakhstan, Argentina, Ghana, Hungary, Poland and Sweden.

Credit New Account

This involves calculating a lump sum amount equal to the present value of the worker's benefit under the old system, based on his/her service to the date of change. An actuarial calculation would be prepared by an actuary for each worker, making assumptions regarding future investment earnings, salary increases and the probability of the participant receiving different types of benefits at different ages.

This amount would be credited to the participant's account in the new system.

This option is required in the United States for cases where a company or other fund sponsor terminates a defined-benefit pension plan, and pays the value to a worker or enables them to transfer the workers' amount to a defined-contribution fund.

The problem with most countries in reform is that they do not have money to use this option. However, it is the only option that allows workers to really benefit from the power of compound interest on their past service credits and have the opportunity for higher account balances at retirement.

Use Notional Credits

This is similar to the previous method, but the amount is only notionally credited to each worker's account. In future years this amount may be credited with notional investment earnings and is paid to the worker when s/he finally retires.

This means that no money is actually transferred to the worker's account, but rather a paper or computer record is kept of what is due to the worker when s/he finally retires.

This option was used in Chile, Peru and El Salvador.

In Chile, the notional credit is carried as a record – but no money is actually transferred – on the worker's individual account on the record keeping system of the licensed pension company and with a government agency which oversees the credits from past contributions to the old system. At retirement, or other withdrawal, the fund must calculate how much should be transferred over from the central authority each year – in essence the fund invoices the former system through the Superintendent. The worker, however, is losing the benefit of investment earnings during this time. Since this period may average between 10 to 30 years for most workers, that is a substantial amount of earnings to lose.

THE ALTERNATIVES COMPARED

The advantages and disadvantages of each of these options is shown below:

Option	Advantages	Disadvantages
Run both systems	▪ Workers' past benefits are not affected in any way. ▪ Transfer to new system is gradual.	▪ Both systems must be maintained. ▪ The old system will need to be maintained for about 40 years until all current workers retire, survivor benefits are exhausted and the system is depleted. ▪ Workers will receive their benefits from two sources (the government and the fund or insurer).

Option	Advantages	Disadvantages
Credit new account	▪ The change from the old to the new system is definite, and made in one step. ▪ The old system does not need to be maintained. ▪ Comparisons between the old and new benefits are discouraged. ▪ Each worker can clearly see the full value of his/her retirement savings. ▪ Workers can be assured that they will receive the full value of their old system benefits.	▪ The government must finance workers' benefits at the time of change. This may be impossible if the old system operated on a PAYGO basis and has no money to fund the credit. ▪ The calculation is dependent on assumptions made by the actuary regarding future investment earnings, salary increases and the probability of receiving different types of benefits. ▪ A complex formula is used to calculate the credit amount, which is difficult to explain. This can lead to skepticism and mistrust of the calculations.
Use notional credits	▪ The government does not need to find the money to finance all workers' past benefits until they reach retirement age. ▪ The old system does not need to be maintained. ▪ Comparisons between the old and new benefits are discouraged. ▪ Workers can be assured that they will receive the full value of their old system benefits (if they receive the money).	▪ Workers are reliant on the government funding their notional amount at some future date. ▪ The amount is still dependent on the actuary's assumptions. ▪ It is difficult to explain how each worker's amount is calculated and this can lead to skepticism and mistrust of the calculations. ▪ The notional amount earns only notional investment earnings, typically at a rate set by the government. This may bear no relation to the rate earned by the workers' other retirement savings.

Challenges in a Reformed Pension System

A reformed pension system faces many challenges that must be overcome if the reform is to succeed. These include:

- Developing the Financial Infrastructure
- Developing the Regulatory Infrastructure
- Encouraging Foreign Players
- Structuring the Regulatory Oversight

Developing the Financial Infrastructure

Capital Markets

The basic conditions for a reformed pension system are a rudimentary banking system and capital market, and the ability of the government to supervise them. Once those conditions have been met, pension funds have historically had beneficial impacts on capital markets in developed countries:

- The money flowing into capital markets has increased;
- Trading by the funds has increased the liquidity of asset markets;
- Funds have demanded more capital market instruments and instrument innovation;
- Managing long-term, illiquid portfolios has generated demands for derivative instruments to separate risk and return, to immunize portfolios (by matching the maturities of assets and liabilities), and to securitize previously non-traded assets such as mortgages; and
- The oversight of pension fund managers has increased the responsiveness of corporate management to shareholders represented by the funds more than could have been induced by the direct but diffuse efforts of individual shareholders.

Theoretical and empirical evidence supports the conjecture that the efficiency of financial markets has a strong bearing on economic growth. Because pension funds have the impacts noted above, a shift towards a funded pension system might importantly accelerate such a development.

It should be noted that some countries that have managed successful pension reforms have not had even rudimentary capital markets, but have coped by having transitional arrangements. For example, for the first few years, pension assets were invested solely in government bonds. Over time, as the countries' financial infrastructure improved, allowable investments were expanded to include local capital markets. Alternatively, international investments can be permitted (within limits) from the beginning of the reform, which allows diversification both across assets types and countries.

Insurance Markets

Typically, the benefit payments in a pension system are managed by the insurance industry. Thus pension funds are responsible for the accumulation side of an annuity and insurance companies are responsible for the payout. Since the ultimate goal of a pension system is the accurate and responsible payment of benefits it is imperative that the insurance industry also be financially stable and well-regulated.

Accounting Standards

If new companies are to be listed on the local capital market, and if pension funds are to operate in an internationally acceptable manner, it is vital that both companies and funds conform to internationally acceptable accounting standards. Thus, the pension reform may need to be accompanied by a wider accounting and taxation reform.

DEVELOPING THE REGULATORY INFRASTRUCTURE

Once the policies are drawn up, work must begin on putting the policies into practice. For instance, the law will stipulate that in order to obtain a license, a pension fund must apply to the Superintendent. It will also specify what must be included in that application. But how should the new Superintendent, who may have no previous experience in this role, decide whether or not to approve the application? How should s/he decide whether or not the statements included in the application are true? What proof should s/he ask for in questions of dispute?

Monitoring and Enforcing Mechanisms

To answer these questions, legally binding regulations should be drawn up, but there must also be procedure manuals to explain how the new regulators should do their job on a very practical level. In the above example, the procedure manual would provide the staff of the Superintendent's office with guidance on how to assess applications from pension funds so that all the legislative requirements are covered and an adequate assessment is made of the capacity of a pension fund to manage a fund in an efficient and prudent manner.

These manuals are clearly intended to be a guide and should not replace the judgement of the staff, especially where it may appear that further examination and substantiation, which is not specifically required in the manuals, should be carried out. Where there are departures from the procedures set out in the manual, though, the staff should set out the reasons for such departures in the reports they prepare on the activities they have undertaken.

In conjunction with the manuals, there should be extensive training of staff to ensure that they fully understand and appreciate the importance of their role in ensuring the success of the reform. The new pension system can only be as strong as the pension funds operating within it, so the licensing and supervision of these funds is very important.

One of the hardest challenges in many transitional economies is overcoming the old “just follow orders” mentality. Such attitudes must now be replaced with independent questioning and thinking. This is especially true in a system that has moved from being centralized to being privately managed. The Superintendent’s staff must go beyond any manuals and have a sound understanding of how funds work and what questions to ask. This can be very hard to teach, and even harder to learn.

They should also be pro-active in identifying abusers of the system or loopholes within it. Inculcating the spirit of the law into regulatory staff is vital.

ENCOURAGING FOREIGN PLAYERS

Any economy in transition will benefit enormously from experienced international investment managers, pension fund administrators and custodians. These firms can be justified by the necessity to import skills required to manage prudently and to sustain the funds for the benefit of current and future pensioners.

Substantial additional benefits will also accrue to the host:

- The transfer of skills and technology.
- The government can mandate that the foreign firms have local partners to ensure knowledge is transferred.
- Experienced firms have deep pockets – the reform would start with strong financial institutions that have sound reserves.
- The government can issue a formal tender, and only permit firms that qualify by completing and successfully demonstrating their abilities to then apply for a license.
- If the Superintendent of Pensions does not yet have its own computer system in place, it can require that each licensed fund give them a computer so that the Superintendent can access each licensed fund’s system.

Other things that the government has to have in place if it wants to attract experienced foreign firms include:

- Open, direct communication between financial institutions and the superintendent;
- Successful communication between the funds and workers/employers;
- No unknowns, incomplete or contradictory government wishes;
- A simple oversight structure;
- An appropriate investment policy;
- An appropriate system of taxing companies. Taxes are good, but unfair taxation or unfair application of standards (lax with domestic firms and compliant with foreigners) will turn away potential new entrants; and
- A complete lack of corruption and incompetence, and a level playing field.

STRUCTURING THE REGULATORY OVERSIGHT

Pension funds operating under Pillars II and III are generally owned and managed by private companies[vi]. These companies are, in turn, regulated by one or more government agencies.

Through such reforms, governments maintain, one could argue even strengthen, their control by designing the pension legislation, regulating the companies which operate in the pension industry and supervising these companies' activities and monitoring the compliance of workers and employers making contributions.

So a government does not lose control by allowing part of the pension system to be privately managed. Rather it gains greater control through leveraging the private industry to do the day-to-day administration work while it regulates and supervises the industry.

Many aspects of a pension fund's operations cross into other, related financial services fields – such as insurance, capital markets, and securities credit rating agencies. The regulatory authority's responsibilities cross into many government departments, such as the Ministry of Labor and Social Protection, the Tax Department, the Treasury Department, and the Health Ministries.

By way of illustration, from the point of view of the tax authorities, it is preferrable not to permit pension funds to accumulate excessive assets as this removes income from taxation (if contributions and investment earnings in a pension fund are not taxed). From the supervisory authorities' point of view, however, such excess funding adds an extra layer of guarantee in the form of additional reserves.

Alternative Structures

There are basically two alternative ways to structure the regulatory oversight of pensions:

(a) One "Super Superintendent" who oversees superintendents in charge of banking, insurance, pensions and securities. The Super Superintendent is at minister level. This has the advantage that there is one authority who has the power and responsibility to protect participants' rights and savings.

(b) A group of superintendents each separately overseeing banking, insurance, pensions and securities. Each superintendent reports to his/her relevant minister. As all these areas overlap, this structure has the disadvantage that each superintendent may step on others' toes from time to time.

Click here to see an illustration of the possible ways to organize and structure the regulatory oversight of licensed pension funds[vii]:

Details of how some countries structure their oversight are provided below:

(a) In Chile there are four primary authorities:
- Superintendencia de Administradores de Fondos de Pensiones (SAFP) or Superintendent of Pensions;
- Superintendencia de Valores y Seguros (SVS) or Superintendent of Securities and Insurance;
- Central Bank of Chile; and
- Risk Rating and Classification Commission (CCR).

(b) In *Uruguay* all financial institutions are regulated and supervised by the Banco Central de Uruguay (BCU), including the licensed pension funds.

(c) In Argentina, the *Superintendencia de Adminstradores de Fondos de Jubilación y Pensiones* (SAFJP) is joined by the Superintendent of Insurance, Superintendent of Banking and Superintendent of Securities at equal levels, along with the Central Bank, the Internal Revenue Bureau (Taxation), and the Department of Social Security.

(d) In Kazakhstan, there are four primary groups:
- National Pension Agency;
- National Securities Commission;
- National Bank of Kazakhstan; and
- State Center for Benefit Payments.

(e) In the United States, only defined-benefit plans are regulated by the Pension Benefit Guaranty Corporation (PBGC), a quasi-governmental agency. All pension plans must comply with the requirements issued by the Internal Revenue Service (IRS) on tax issues and Department of Labor (DoL) on workers' rights and non-alienation of benefits.

(f) In *Australia*, the Australian Prudential Regulation Authority (APRA) oversees both:
- The Bank Supervision Department of the Reserve Bank of Australia; and
- The Insurance and Superannuation Commission (ISC) – which in turn oversees all the operations of superannuation (pension) funds, life and general insurance companies and insurance brokers.

(g) In the United Kingdom, there is a Financial Services Authority (FSA).

(h) In *Hong Kong* the new reform is organized so that the Mandatory Provident Funds Authority (MPFA) will supervise the licensed funds.

(i) In Poland the Pension Fund Supervision Office (UNFE) will oversee the granting of licenses and the supervision of the Universal Pension Fund Companies. Contributions will be collected from employers and disseminated among the pension funds by ZUS, the central tax authority.

(j) In Sweden, the Swedish National Social Insurance Board will supervise the pension contributions and investments.

Functions of a Pension Superintendent

Generally the functions of the Pension Superintendents are as follows:

- To approve or reject applications from a fund to become licensed (based on data provided in the fund's application), to approve the fund's by-laws, and to authorize its existence;
- To supervise the operations of licensed funds – legal, administrative, and financial;
- To ensure compliance by the licensed funds with issues such as minimum capital and reserve requirements;
- To analyze and recommend legal or regulatory amendments to constantly improve the operation, cost and general acceptance of the system;
- To monitor investment policy compliance;
- To ensure a smooth transition of worker account records and their assets in the event of bankruptcy of one of the pension funds;
- To resolve complaints;
- To interpret legislation and regulations and issue mandatory general rules to be applied by employers and licensed funds;
- To levy fines against violators and, when applicable, enforce dissolution or transfer of the administrators;

- To ensure the solvency of the system by actuarially examining the contribution rates and provisions/reserves; and
- To monitor and report on general economic conditions with respect to the pension industry. See Establishing New Pension Superintendent for more information.

PART 3:
Implementing Pillar I Pension Reform

INTRODUCTION

The Pillar I component of the prototypical three-pillar pension system represents a theory of public policy that all workers[3] should contribute to a social insurance program that will replace the income some workers no longer earn due to retirement, death or disability. Like all insurance mechanisms, such schemes represent a pooling of risk and the design of such programs is rooted in the theory that the contributions of the many will be paid out to those who are entitled to receive benefits under the program. The major public policy consideration is that it is a social good that the elderly, disabled, or the survivors of workers who die prematurely not become a burden on society through the necessity of instituting *ex ante* welfare schemes.

Since Pillar I programs result in transfer payments and that the funds being transferred are more in the nature of social taxes than they are individual pension savings, it is apparent that government must institute exacting methods to identify persons subject to this tax and collect the same from them. There are rarely strong traditions of voluntary tax compliance in emerging economies. Additionally, the government must implement rigorous controls to assure that those receiving benefits are entitled to them and otherwise fairly apply the law regarding all other aspects of the Pillar I scheme so that its objectives are realized.

In the following discussions under this section, institution of -- or the reform of -- a Pillar I old age, survivors and disability social insurance scheme is complex in both policy-making requirements and institutional capacities. It is critical to have a through understanding of the economy and the ability of a nation to absorb and operate a Pillar I scheme. While "pension reform" is probably a laudable objective of development, it should not be undertaken unless there is a reasonable likelihood of success. That means that the predicates to the policy and technical issues -- discussed below -- are in place or will be **first** put in place prior to instituting the program. The success of such programs depends in large part upon public perception of their reliability, value and fairness. If a new or reformed pension program is instituted before the necessary prerequisites of economic sustainability and existence of sufficient human and technical resources are met, then public confidence will dwindle and any subsequent rehabilitation of the system will spend unnecessary time and treasure and be the subject of public skepticism.

TRANSITION ISSUES

One of the most vexing issues which will face policy makers in a pension reform undertaking will be the manner in which workers' benefits earned and any unfunded liabilities accrued under any existing public pension system will be dealt with. The

[3] While it is true that often both employers and employees contribute to these programs, it is fairly well-settled that such taxes are essentially taxation of labor and thus the contributions represent *de facto* payments of workers.

issues will be fiscal and political and the competing interests of sustainability and affordability will clash with perceptions of fairness and entitlement.

There is no easy answer and solutions most likely will be fashioned based upon what is politically acceptable to the government of the day.

Policy makers who are more inclined to view pension policy as an integral part of the social contract than as an issue posing short-term political risks or opportunities for demagoguery should address the issues of transition with the following objectives in mind:

(a) There should be a dispassionate and rational assessment of the current system. If it can be rehabilitated it should be -- only if it is unsalvageable or if its structure and operation does not meet the needs of a cogent and sound public pension policy should it be dismantled. Too often there is a mindset that new is necessarily better. However, if a remediation of the existing plan will serve the public, one avoids the whole issue of accounting for the previous system.

(b) If the existing system is unsustainable, a successful transition to a new system cannot permit a wholesale bail-out of the previous system. Failure to modify the current system in its future application will likely assure failure of it as well as the new system.

(c) Transition must be phased and extend over a long enough period of time to permit current workers to adjust their saving and consumption decisions to account for changes in public pension benefits or taxes or both.

(d) If the current system has been a failure, the administration of the current system must be scrapped. A new system, if it is to be properly implemented, must control all of public pension administration. Any remnants of the prior system, which will survive during the transition period, must be placed under the aegis of the agency, which will be administering the new system. Experience has shown that with management resources usually being a scarce commodity any attempt to operate with two agencies will dilute resources and assure the mismanagement of both.

OVERVIEW OF PILLAR I IMPLEMENTATION TOPICS

This section of the *Guidebook* is organized with the objective of presenting the main policy and technical issues to be resolved in implementing a Pillar I pension program.[4] There are six critical areas of administrative process involved in implementing a Pillar I program:

- Identification
- Centralized Administration, Recordkeeping and Information Management

[4] It is not the intention of this guidebook to design a prototypical Pillar I system. However it is the purpose to provide a checklist of major issues that must be addressed in such a design process.

- Collection and Allocation of Contributions
- Eligibility for and Payment of Benefits
- Dispute Resolution
- Enforcement

Each of these elements will be discussed along with the policy and other issues that must be resolved. Where there is evidence for a "best practices" approach, that proposition will be made.

IDENTIFICATION

THE FOUNDATION OF THE SYSTEM

The maintenance of the Pillar I identification system is the foundation of any such program. The goal must be to achieve universal compliance within a reasonably swift period of time. **If an economy is not able to institute a universal identification system, it is not able to institute a universal Pillar I social insurance scheme.** That is not to say that less ambitious programs can be instituted as a prelude to universal coverage -- in fact, in most cases, a phased approach is often the wisest strategy.

RELIABILITY AND ACCURACY

An elemental part of a well-structured Pillar I pension program is a reliable and secure system for identifying employers and employees who will be contributing to the pension scheme. Also, in the benefit calculation function and – more importantly – in the collections/enforcement areas, it is vital that there be a method of accurately identifying an individual and determining his earnings and contributions records. This also will be a core function that applies to the Pillar II pension funds. Moreover, since Pillar II and Pillar III benefits may in some cases affect Pillar I benefits, a quick method of locating an individual's other pension accounts must be found.[5] Finally, the benefit of an individual may depend upon the earnings of another person (say, one spouse's benefit may be adjusted based upon earnings of the other) or benefits may be increased because of the status of other persons (for example, a widow may receive benefits based upon the number of minor children she supports). All of these elements of a well-administered Pillar I program rely to some extent on a reliable identification and authentication system.

UNIQUE IDENTIFICATION

For ease of reference, the identifier to be issued to individuals will be referred to herein as the **Social Insurance Number** or **SIN** and the identifier assigned to employers and other possible contribution collection and payment agencies is designated as the **Social Insurance Collection Code** or **SICC.**

[5] For example, in the calculation of benefits payable under a Pillar I program, it is likely that some jurisdictions will consider benefits payable under an individual's Pillar II and possibly Pillar III plan(s) in calculating the actual Pillar I benefit. In other words, in addition to other types of "means testing" that may be applied to the Pillar I benefit determination, it is almost a certainty that the resources available to a retiree from Pillars Two and III programs will be part of any "means testing" protocol.

The SIN and SICC themselves must have certain attributes in order to be of value. These are:

(a) The identifiers must be **unique**. The design and construction of the identification system must be for the sole purpose of implementing the Pillar I program and facilitating the efficient administration of other segments of the pension system to the extent necessary.

- Attempts to adapt existing identification systems do not work since is extremely unlikely that any existing system was designed with the rigor and the universal application that a well-constructed SIN system will have. As will be discussed later, there are strong public policy and administrative "best practices" reasons for tightly controlling the SIN process so that the number becomes a reliable and unique identifier.
- The agency that executes the Pillar I scheme must ***exclusively*** control the process of issuing the identifiers (although in certain circumstances an existing universal system that identifies employers may be substituted for the SICC).
- As has been previously mentioned, Pillar I programs are ordinarily income-redistributive and often times are subsidized by general tax revenues. Also, some Pillar I schemes -- or other social safety net programs -- will provide a "minimum benefit" or some other supplement or valuable thing based on considerations other than earnings. Thus, in order to maintain the integrity and solvency of such programs, care must be taken to assure that individuals receiving such benefits or whose benefits are increased because of a means testing formula are receiving benefits because they truly qualify for them and not because they may have several SINs and worked under various aliases in order to dilute earnings and qualify for multiple minimum benefit programs or other social payments.
- Also, there must be a means of identifying persons who are contributing to the Pillar II program since the enforcement of and implementation of such mandatory programs are integral parts of a society's comprehensive social insurance policies.

(b) The SIN must never change over the lifetime of the individual.

- If a number is going to be the means of identifying an individual, then the identifying number should not change.
- There may be circumstances when the individual information contained in his record may need change. For example, in some societies a woman takes the surname of her husband when they are married. In such a case the woman's name would be changed on her records, but her SIN would not change. Earnings and contributions records should be associated with the single SIN for ease of administration at benefit-determination time as well as for continuous enforcement of collections.

(c) A highly secure method must exist for issuing of the SINs in order to prevent issuance of multiple numbers to the same person or the same number to more than one person. As previously mentioned, many Pillar I programs provide for the payment of a minimum benefit irrespective of an individual's earnings or contribution history. Thus, there may be incentives for individuals to perform work under a number of aliases in order to qualify for a number of separate minimum-benefit accounts under Pillar I. Pillar I benefits may also be subject to adjustment because of amounts payable under Pillars II and III. It could be advantageous to an individual to attempt to "hide" such resources through the use of multiple SINs.

- In order to receive the SIN, the individual would have to appear personally at the administrative agency's office and produce sufficient proof of identity. The agency would then scan its records to assure that this individual had not previously been issued a SIN. Absent fraudulent original identification documents, a relatively simple search of names can detect the possibility of a person attempting to obtain additional SINs. Vital statistics can also be inputted which will remain a part of the individual's record and which will have to match with the vital statistics of the document submitted in order to begin receiving benefits.
- **However**, there is a school of thought that would not impose such a burden on obtaining a SIN. In the United States, for example, it is relatively simple to obtain a social security account and no identification needs to be produced. The mechanisms, which are designed to prevent fraud upon the system, are applied at the time that an individual desires to claim his benefit. The theory is that it is better to encourage persons to apply for and receive a SIN by streamlining the process of issuance. The vetting process can be followed at the time an individual applies for benefits.
- In some circumstances, the better course of action is to require a "pre-issuance" vetting process. The procedure of requiring proof of identity at the time benefits are claimed does not readily lend itself to discovering workers who have worked under different names and different SINs. Such a procedure requires a highly sophisticated and secure public records or vital statistics system. Also, it is likely that Pillar I systems will permit alternate forms of identification -- forms, which might be more susceptible to alteration by a person desiring to defraud the system. Finally, if benefits under Pillar I are going to be affected by benefits earned under Pillars II and III, it will always be to an individual's advantage to secure additional SINs so that he might disperse his contributions to several Pillar II and Pillar III systems under different names and SINs. While an individual gains the benefit of his contributions, any reduction in benefits because of "means testing" of Pillar I benefits would be minimized. Naturally, there are methods to combat all of these abuses, but on balance it seems more prudent to make the system of SINs unique, singular and secure in the first instance.

(d) In order to be employed a person must present a valid SIN certificate or other type of proof of the validity of that particular SIN. Employers must be charged with enforcement of this requirement and severe sanctions should be provided for noncompliance. In order to identify employers, a unique method must be instituted.

- Since the most efficient method of enforcing collections of payroll taxes for Pillar I schemes (and likely for Pillar II contributions, as well) is through an employer withholding the employee's share from wages and paying the withholding plus sums which are due from the employer, it is important that a method for identifying employers be instituted. Accordingly, issuance of the SICC must be implemented. As mentioned, a system may already exist -- such as a taxpayer identification number. However, all employers may not have such a number. Additionally, particularly in the case of self-employed persons, some identifier must be devised in order to track contributions.[6] Since a system relying heavily on the banking sector and the central bank's clearing and settlement functions is probably going to be the most efficient method of collecting contributions (as will be discussed later), there must be a protocol which permits identification of the employers as well as the employees and which also permits post-audit and other enforcement procedures.
- Making possession of a valid SIN the equivalent of a work permit is intended to provide incentives for compliance -- at least in the formal employment sector. If workers need a SIN in order to work and the employer is charged with the responsibility of verifying that the prospective employee has a valid SIN a condition to employing the worker, the chances of compliance with payroll tax payment requirements is enhanced. In the case of the SICC, it is one method which can be used in establishing the process for self-employed persons to transmit payroll taxes and Pillar II pension contributions to the appropriate authorities.

[6] The SICC for the self-employed may not be necessary in countries like the United States where the contributions to Pillar I are made through the income tax system. However, such a protocol would not be useful in a country which has a mandatory private pension program (Pillar II) or a history of low tax compliance.

(e) Since a valid SIN is a valuable asset of the individual and misuse of it by others could result in economic or other types of detriment, the disclosure of the SIN to persons, firms or organizations (both governmental and otherwise) other than the administering agency of the insurance program and the individuals private pension funds should be severely restricted (if not prohibited).

- There is always the possibility that someone could misuse the SIN of another person. Additionally, since the SIN is universal identifier and a reliable method of identifying an individual's employment and earning, there are issues of personal freedom involved and rights to privacy. There may be cultural, historical or political reasons why a country would not want to have a program that could be used as a national identity standard used by other branches of the government or by non-governmental organizations.

Each of the above points is merely a menu of issues to consider in designing the identification phase of a Pillar I program. The political and practical imperatives extant in a particular country will often determine the exact system of enumeration -- what is important that the objectives served by having a unique identifier be achieved.

Centralized Administration, Recordkeeping and Information Management

Need for Centralization

If a country is going to adopt a national pension system, it must have a national, centralized body of the state to administer the program and follow-through on implementing the will of the polity as expressed in its pension policy and program. Uniformity throughout the country and steadfastness of purpose are unlikely to be achieved if more than one agency is involved in policy and decision making and execution. Accordingly, a single agency-- identified herein as the **Social Insurance Agency** or **SIA** -- must have the sole authority to implement the enabling legislation of the Pillar I pension program and must also interface with the governmental agency charged with the oversight of any Pillar II and III programs as well as the pension funds comprising the private pension industry.

Tasks for the Social Insurance Agency

There are a number of tasks that must be performed in order to execute effectively the elements of any Pillar I program. Ideally, all of these tasks will be the responsibility of the SIA. However, it is always possible that some tasks can be performed by other departments of government without diminution to the overall objective of a consistent pension policy and a uniform administration of the plan. In any case, these tasks must be performed by some organization and the performance must be in harmony with overall Pillar I policy.

These tasks are:

- Issue SINs (sometimes referred to as "enumeration")
- Collect of contributions
- In jurisdictions where the SIA collects contributions to Pillar II or even Pillar III programs, the SIA must be able to allocate properly and distribute rapidly contributions to private pension funds.
- Determine an applicant's eligibility for benefits under the Pillar I plan.
- Calculate benefits due person's eligible for the same under the program.
- Execute payments to beneficiaries.
- Maintain a data base comprising:
  - ✓ the earnings and contributions records of each participant in the Pillar I program;
  - ✓ the status of current payees (beneficiaries);
  - ✓ changes in the basic identification information of current workers;
  - ✓ newly issued SINs; and

- ✓ such other information necessary to carrying out the purpose of the legislation and the design of a country's pension system.

- Gather or compile such information as will be necessary to assist in enforcement of contribution requirements of employers and employees.
- Maintain appropriate oversight programs to assure that benefits are paid only to persons entitles to them.
- Maintain appropriate liaison with private pension fund regulators, the central bank and the securities supervisory authority.
- Maintain an appropriate policy analysis capability within the SIA.
- Maintain an effective dispute resolution mechanism.
- Maintain a public information and consumer assistance apparatus.

An Adequately Funded, Well-Staffed and Well-Equipped SIA

- It makes little sense to institute a comprehensive Pillar I system and withhold adequate funding, staffing and equipment from the SIA. Careful consideration must be given to methods of adequately funding the SIA's operations.
- A decision must be made early in the planning process regarding the manner in which the budget of the SIA will be funded. Will it come from general government revenues? Will it receive a percentage of the funds it collects as ear-marked revenue to support operations? Will it be supported by fees levied on the private pension funds?
- It should be borne in mind that the degree of sophistication and skills required in the SIA would distinguish it from other governmental activities. There is a danger that keeping the SIA in a standard "civil service" classification system will necessarily make it difficult to recruit and retain highly-able personnel. Additionally, putting the SIA under the requirements of a standard "procurement" protocol may prove cumbersome, inefficient, time consuming and expensive.
- Consideration should be given to having the SIA established as an organization with fiscal autonomy funded by some assessment on contributions. This does not mean that the government will not have control. For example, the enabling legislation may require that the total budget of the SIA has to be approved by, for example, parliament and that the personnel classifications and procurement policies of the SIA must likewise be approved. However, the SIA must be given the management freedom to operate without being mired in bureaucratic processes.
- In addition to adequately funding the costs for highly skilled personnel, funding requirements will necessarily be driven in large part by the cost of technology resources. Operating the SIA will be, as stated, a labor of information management and will require adequate systems and skilled personnel able to maintain those systems.

- A vital cog in the machinery of SIA management will be adequate communication media. On a regular basis (perhaps as often as weekly), contributions requiring reconciliation to the account of each worker in the country will be flowing into the SIA. If the SIA also acts as the collection agent for the Pillar II or III programs, those funds will have to be properly allocated to the pension fund designated by the worker and the funds themselves quickly transferred to the pension fund's account so that it may begin investing the contributions.
- Communication systems must be specially dedicated and equipped to handle the large volumes of information, which will be flowing through the processes of collections, allocations and payments. It has been the experience of many experts on these types of schemes that an arrangement whereby the SIA is able to avail itself of the central bank's clearing and settlement system is the most efficient, secure and reliable method for communicating information and transferring funds.
- The SIA will be required to maintain records for each worker and beneficiary in the country and to keep such records current. Again, this is a large technology issue, which must be addressed, in the initial planning of the Pillar I scheme.
- Finally, the SIA will require an internal policy analysis capability. Pillar I systems do not operate in economic vacuums and it almost a certainty that the actuarial and financial assumptions that comprise the initial calculations of contributions and benefits will require modification. In any case, the actuarial and financial indicators will absolutely require close monitoring and the SIA must be positioned to evaluate the information it has by virtue of administering the Pillar I program and also be able to obtain other data which will affect the future operations of the program.

COLLECTION AND ALLOCATION OF CONTRIBUTIONS

One of the prime operating functions of the SIA will be collections of contributions, allocation of contributions and maintenance of records regarding earnings and contributions. It is possible in some systems that some entity other than the SIA will physically collect contributions (and allocate them if there is a multi-pillar system), but the SIA nonetheless must be responsible for maintaining the records of earnings and contributions which will be credited to an individual worker's account.

There will be a number of vital statutory or regulatory prerequisites to enabling an efficient collection and recordkeeping system. These will be:

(a) A requirement that every employer (and every self-employed person covered by the social insurance system) make contributions as otherwise required by law and, additionally, submit information required for the SIA to properly account for covered earnings and contributions for each individual worker. In addition, the transmission document must require that the employer include the SIN for each worker and the SICC for the employer or other payer of the contributions.

- In Kazakhstan for example, the abstract of the Decree which sets for the requirements for transmittal of information required the following:
  - ✓ *Every enterprise, whether or not it is a legal entity, which employs persons situated in Kazakhstan, and every person or group of persons which receives compensation for services rendered in Kazakhstan on any basis other than as an employee of the person, firm or organization paying for such services shall comply with the Pension Law of Kazakhstan and make pension contributions as therein prescribed.*

(b) Establishment of a contribution payment mechanism so that funds and supporting detail can be efficiently and accurately transmitted.

- Experience has shown that in developing economies, the contribution payment mechanism most likely to be able to cope with the tremendous flow of information and funds from so many individual sources is the banking system -- specifically the payments system utilized by the central bank. However, even a country's payments system may not have the capacity to handle the great volume of detail which will be flowing into the SIA (or other collecting agency).
- Using the Kazakhstan abstract as an example:
  - ✓ *Each enterprise or other entity which must make pension contributions for itself or for its employees shall open an account in a commercial bank or government bank in Kazakhstan for the sole purpose of making such contributions. The account shall be in favor of the State Center for Benefit Payments (SCBP).*

    At the time the contributions are paid into the bank account prescribed, the payor shall also provide to the SCBP a listing of each individual on *whose behalf or for whose benefit the contributions are made. The listing shall be in a form prescribed by the SCBP.*

The enterprise or other entity making the contribution shall be responsible for providing to the SCBP the name of the bank and the account number of the SCBP account at such bank, the name of the individual, the Individual Social Code of the individual (or some other unique identifier if the ISC has not yet been obtained), the gross amount of wages, the amount of contribution which will be retained by the SCBP, the amount of contribution which will be transmitted to an accumulation fund chosen by the individual, and the amount of any additional voluntary contribution of the individual.

The enterprise or other entity shall also classify the contributions according to the gross amounts which are payable to each payee entitled thereto.

The form submitted to the SCBP will be signed by a responsible person.

(c) Creation of a uniform reporting format to enable the SIA efficiently and accurately to record earnings and contributions data and to facilitate the recordkeeping and allocation functions of the Pillar II and Pillar III pension funds.

- It can not be stressed too heavily that the documentation that supports each "jumbo"[7] payment from each employer must be compatible with the information processing system that will be used by the SIA.
- While it may seem relatively simple to design a form calling for the required information applicable to each employee -- and it is -- the critical issue is to design a form which will be adaptable in its electronic format. Some employers may be submitting the payment to their banks in a paper format and some may be submitting in an electronic format derived from an automated payroll system.[8] In any case, any format must then be "converted" to a format that will be compatible with the central bank's clearing and settlement system or such other media as are utilized to transmit funds and information.

(d) Storage of reporting information in a format and with a retrieval capability which will facilitate enforcement of the social insurance contribution requirements on both employers and employees. This information also ought to be available in order to facilitate enforcement of any Pillar II programs.

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[7] A "jumbo payment" is simply the transmittal of one payment order that represents the contributions made by each employee plus any contributions made by the employer. The information included with the jumbo payment must be sufficient to allow the SIA and other recipients to reconcile the individual detail with the total payment.

[8] Another option is one actually used in Kazakhstan -- submission of diskettes by employers.

BENEFIT ELIGIBILITY AND PAYMENTS

The objectives of the Pillar I program is 1) to replace income for persons who retire, 2) to provide income to survivors of workers who had retired or who die prior to retirement age, 3) to provide income to workers who become disabled and are no longer able to earn income.[9]

(a) Accordingly, the SIA must establish a readily accessible and efficient process for applicants to submit claims and provide evidence of entitlement to benefits under the Pillar I program. This procedure will also require the design of a suitable application form, which will adduce the information required for a rapid and accurate adjudication of the claim.

(b) Additionally, the SIA must be prepared to execute a number of tasks in order to perform its responsibilities under the prevailing law in:

- determining the eligibility of applicants for benefits,
- calculating the amounts of those benefits and
- establishing efficient and secure procedures for making the payments of benefits to persons entitled to them.

(c) Finally, the SIA must maintain a current database of benefit recipients and have the capacity to make adjustments to benefit payments if warranted.

THE APPLICATION PROCESS

The Application Form

The SIA will need to design a form for use by individuals in applying for benefits. This form should be designed with the intention to provide the following information:

- The applicant's name and SIN
- Other unique vital statistics (such as date of birth, place of birth, names of parents)
- Names and SINs of dependents or spouse or both
- Type of benefit applied for and such information pertaining thereto so that a preliminary determination can be made as to whether the applicant makes a *prima facie* case for eligibility
- If application is for pension benefits, the names of any Pillar II or III pension accounts owned by the applicant or spouse[10]

[9] We will use the general term "benefits" herein with the understanding that a variety of benefits may be available under the Pillar I program.
[10] This information may be unnecessary depending upon the design of the Pillar I plan.

Additionally, the form must be readily adaptable to conversion into electronic format so that it may be used to transmit information to the centralized data base.

Physical locations of facilities

(a) As noted, there must be an administrative system and process established which would permit individuals to submit claims. The exact procedures will vary depending upon the characteristics of the country.

- For example, in countries where population is dispersed over large areas, it might make sense for the SIA to establish a number of branch offices for the purpose of receiving claims and for providing a local point of contact to disseminate public information and to receive benefit inquiries and begin investigations of disputes.
- In other circumstances, it might be more useful for the SIA to establish mobile units which would "ride circuits" throughout particular regions and provide such services on a regular schedule.

(b) It is important to determine the optimum locations for the branches based both on the need to serve workers and beneficiaries as well as the availability of communications facilities to the central administration center of the SIA.

Staffing of branch offices

(a) The level of staffing of the branch offices will depend upon whether the SIA decides to permit autonomy in benefit determination by a particular branch. In other words, if the SIA decides that some or all of its branches will be permitted to verify eligibility for benefits, calculate benefits and generate payment requisitions, then more senior personnel and an internal review capacity will have to be assigned to such branches.

- Irrespective of the autonomy of the branch offices, it will still be necessary that the branches have access to the SIA database in order to verify earnings records, contribution histories, and personal information for each applicant.
- The branch offices will require information management and communication systems, which will, in addition to permitting verification of an applicant's eligibility for benefits, permit an accurate and uniform method of calculating benefits. As noted previously, this may require the ability to communicate rapidly with an applicant's Pillars II and III programs.[11]

[11] As also previously noted, it may well be that an applicant may have attempted to disperse his Pillar II payments among a number of pension funds in order to minimize the affect of any reduction in Pillar I benefits due to availability of Pillar II resources. Thus, a means must be instituted to search all Pillar II and III schemes for similarities in an applicant's personal profile in addition to his SIN.

- Since it is most secure and efficient to use a centralized payment location to generate benefit payments, it will be imperative that the branch offices' determinations of eligibility and amount of benefits be accurately and timely communicated to the payment center.

Determining eligibility

(a) It will be quite important that the enabling legislation for the Pillar I program is drafted tightly so that the standards for qualifying for benefits are clear and unambiguous. This objective is relatively simple to reach in the case of retirement benefits, but it may be much more difficult to be precise in establishing standards for disability or other types of benefits which may be provided in the Pillar I scheme.[12]

(b) The benefits examiner will have to carefully review the documentation that is to be submitted along with the application for benefits. Additionally, the benefits examiner should be certain that the information contained in the application is complete and accurate. The application information will be used not only in the eligibility and calculation processes but also it will be used in post-audit enforcement and monitoring procedures to detect fraud or abuse in the system.

Review of eligibility determinations

The SIA should establish a process for a review of benefit determinations. The extent of the review process will depend upon the degree of autonomy of a particular branch office and the extent to which the SIA will be able to review benefit determinations at its central payments facility.

Payment procedures

The objective of the above procedures is to make the correct benefit payments to individuals entitled to such under the Pillar I program. The SIA must make sure that beneficiaries receive funds on schedule and securely. In many cases, the Pillar I benefits will represent the only income available to people and the public policy objective of replacing income will be thwarted if the SIA is unable effectively to execute this vital mission.

[12] The process will be further complicated in cases where there will be the necessity to establish eligibility on a continuing basis -- say in the case of disability benefits.

The optimal method for making benefit payments is through the banking system. The same system which is used to transmit jumbo payment orders to the SIA can be used to transmit deposits directly to the banking accounts of individual beneficiaries. In some countries, such a procedure is mandatory. The objectives of such a system are:

- to reduce the administrative costs associated with making several million individual payments,
- to assure that benefit payments are not lost, stolen or otherwise misdirected, and
- to provide a clear audit trail for use in monitoring the integrity of the program.

It is entirely possible that in some countries a significant number of recipients will not have convenient access to banking facilities or that the costs of procuring banking services may be prohibitive for persons living on subsistence-level incomes. In such cases, alternative methods must be devised. Some options include:

(a) Encouraging banks to provide a "no cost" facility for Pillar I payments. In many cases the provision of a minimum level of banking services at no cost to the "depositor" could prove profitable since it would assure the bank of a predictable inflow of funds and would in some cases encourage the beneficiary to use other banking services.

(b) Arrange for payments due individuals without access to banking facilities to be delivered to SIA branch offices. The SIA could then make arrangements for secure delivery or permit recipients to collect payments at the branch (in such cases the branch should arrange a check cashing service -- at no cost to the beneficiary -- at a nearby bank).

(c) To the extent that the postal service is reliable, some countries could use that method. However, it unlikely that such a system will work in many countries and security and regularity of payments will suffer in such a system.

(d) Consideration should be given to using some other entity as a payment facilitator or the SIA could institute a system of providing a credit at the most convenient and reputable commercial enterprise. For individuals who live in remote locations which are not accessible to the SIA, a bank, the postal service or some other governmental organization.[13]

(e) Consideration can also be given to "piggy-backing" the Pillar I payments with Pillar II payments. It is likely that the Pillars II and III programs will encounter many of the same logistical problems faced by the SIA program. A concerted effort by the other funds will likely result in an almost total reliance on the banking system to make payments at no cost to recipients.

[13] It also may be necessary to provide advance payments in some locations if seasonal weather conditions will make individuals inaccessible for long periods of time.

MAINTAINING THE DATA BASE

The SIA must keep exact records of payments made. In some countries, payments may be subject to income tax or withholding tax. The SIA must be able to fulfill any reporting obligations it may have to the tax or other governmental agencies.

More importantly for the SIA, all payments under the Pillar I scheme will be subject to a continuous "qualification" standard. Pensions are payable only for the life of the pensioner or his spouse; survivors benefits are usually age-linked; and disability benefits require a showing of permanence. There may be other program benefits which have to be monitored. Therefore, the maintenance of a reliable and current data base will be an integral part of the SIA's enforcement tasks.

Finally, it is also likely that the Pillar I benefits will be subject to periodic adjustments -- either through a formalized indexation requirement or due to *ad hoc* increases in benefits. The payments system and the database must have the capacity to institute such adjustments.

DISPUTE RESOLUTION

It is inevitable that a government program that pays money to individuals based upon distinctions of status will make decisions, which are not agreeable to some persons who make those status-based claims. Additionally, any program as large and complex as a universal pension program based upon several years of earnings and contributions will make errors -- or at least be subject to claims that errors have been made either by the administering agency or by reporting employers.[14]

In industrialized economies with strong traditions of orderly process for the resolution of disputes with governmental agencies, intricate processes have been instituted. Generally such procedures involve an internal review at the supervisory level, the opportunity to present a claim at a contested-case hearing before an administrative law judge pursuant to provisions of an administrative procedure act and the right, in certain circumstances, to pursue remedies in courts of law. For example, the 1998 Social Security Act in the United Kingdom contains statutory requirements on internal decisions, decisions which may be appealed, decisions which may not be appealed and sundry other dispute resolution procedures applicable to particular classes of benefits payable under the Act.

While such processes are appropriate to a country with a highly-developed legal system and a wealth of legal practitioners who understand both the legal system and the substance of social security law, it is unlikely that economies instituting Pillar I programs or reforming existing social insurance schemes will be as highly developed or have the degree of expertise sufficient to support the type of intricate dispute resolution process found in countries with mature social insurance programs.

Accordingly, at least in the infancy of a Pillar I program, the SIA should be vested with the exclusive authority to resolve disputes with respect to eligibility, calculations and continuations of benefits. Perhaps an appeal to the judicial system ought to be permitted in certain extraordinary circumstances, but it is unlikely that judges will understand the pension law and the elements driving particular decisions of the SIA. When model Administrative Procedure Acts were first proposed in the United States, the feeling was that in highly technical areas it was the best practice to have the evidentiary hearing within the agency so that the agency could utilize its technical expertise in rendering decisions. Decisions were expected to be rendered more quickly and more fairly since the agency was presumed to know more about the subject matter and would thus need less foundation evidence and would understand the issues.

If there is a desire to remove the adjudication process from the SIA, then a special tribunal which would adjudicate only with such disputes should be established. The issues to be tried require hearing officers with expertise -- leaving such decisions to

[14] No system of internal control can insulate an organization against human error.

the regular court system will likely invite an uneven application of the law and unacceptable disparities in results.

Another alternative would be to require the hearing at the SIA level and then permit appeals to the special-purpose tribunal. However, the appeals should be only on matters of law and sufficiency of the evidence to support the hearing officer's findings of fact. Establishing an appeal process permitting a trial *de novo* will be inefficient and strain upon the system.

ENFORCEMENT

The most desirable method of enforcement of the requirements of the Pillar I plan is to create an enforcement capacity within the SIA. The SIA will have an institutional incentive to enforce the law and its rules and regulations. Vesting enforcement in another agency -- such as the tax authorities or in the Pillar II and III supervisory authority will not result in that incentive. Those organizations will not have a stake in the Pillar I enforcement scheme -- or at least they will not have as much of a stake as the SIA.

Accordingly, the following analysis of the enforcement challenges and the structure of the mechanism is presented in order to assist in planning and implementing pension reform:

ESTABLISHING AN AUDIT FUNCTION FOR THE SOCIAL INSURANCE AGENCY

Overview

The main functions of the Social Insurance Agency (SIA) are:

- assignment of the SIN to all workers and retirees,
- payment of pensions,
- collection of employer and employee contributions to the pension program, and
- proper allocation of pension contributions between the Pillar I program and the contributors' respective Pillar II and III funds.

Because of the volume of transactions and the large sums of money involved, it is important to assure accuracy and to safeguard the funds of the government and of the workers. Hence, it is vital that the SIA establish an audit capability not only to enable it to perform its own functions in a responsible manner, but also to permit the other agencies[15] to perform their functions as well.

The SIA must plan and implement an audit function and establish a unit within its central headquarters to perform the tasks necessary to assure that:

- the pension law is being implemented in accordance with its terms,
- the policies of the government and the SIA are being complied with, and
- the data processing and other functional responsibilities of all branches and instrumentalities of the SIA are producing accurate results and effective service.

[15] These other agencies include the Tax Office and the Private Pension Supervisory Authority. Moreover, the types of data that the SIA can collect – if accurate – can be of great usefulness to the fiscal planners and can be used by the private sector (most notably the life insurance industry) in market-based initiatives.

Broad Strategy

The SIA should establish a unit that will be responsible for performing pre- and post-audit functions. The general responsibilities of the Audit Unit should be to:

- safeguard assets,
- assure quality controls, and
- interface with other agencies to foster compliance with the pension law. (This unit could also be responsible for assuring security within the SIA).

Finally, both the Audit Unit and the Benefit Determination Unit of the SIA should be trained in performing their functions.[16] More importantly, the SIA should also begin designing an audit guide as well as a library of SIA policies and procedures that will be applicable to the Audit Unit's functions.

SIN Audit Function

Because SIN issuance is controlled by the SIA headquarters, the Audit Unit will initially concentrate its efforts on post-audit of SINs issued. This will include:

- Sufficiency of information necessary to issue the SIN.
- Adequacy of controls to prevent issuance of duplicative numbers.
- Adequacy of procedures for identification of employers whose employees have no SIN.
- Adequacy of procedures for identification of pensioners who have no SIN.
- Establishment of procedures to determine if any persons have more than one SIN.

However, the Audit Unit will also become involved in reviewing procedures and practices of the branches of the SIA that are responsible for taking the initial applications for the SIN and for delivering the identification cards. These functions will include:

- On-site inspections of branch offices and reviews of completed documentation.
- On-site inspections of employers to determine if proper procedures for issuance of the SIN are being followed for existing employees and for newly hired employees.
- Review procedures for delivery of identification cards to workers and pensioners.

It will also be important for pensioners, both existing and new retirees, to have the SIN. Thus the Audit Unit should be authorized to review procedures to assure the widest possible compliance with the SIN requirement. The initial evidence of any

[16] The training programs and strategy are not germane to this discussion, but the subject matter of the Audit Unit training is certainly inferable from this memorandum.

non-compliance will come, of course, through review of pension payment requisitions.

Pension Payments

One of the most critical functions of the SIA is the payment of pension benefits. This is because it involves the expenditure of large amounts of funds to pensioners and other beneficiaries.

The Audit Unit will primarily focus on reviewing the supporting documentation for the eligibility and amount of pensions and determination that pension benefits are being paid to the proper parties.

The objective of the audit is to identify any errors that affect the eligibility for a pension or the amount of the pension benefit.

The auditors will focus their attention on the following areas:

- Review of documentation establishing identity and eligibility for a pension, with particular attention to any stepped-up benefits.
- Test of calculations.
- Test propriety of pension payment information (i.e., bank account, address).
- Review of beneficiary information.
- Audit of bank payment information.
- Determination if SIN indicates the existence of an active contribution account to the pension system.

Collection of Contributions

The success of pension reform depends in large part upon wide-spread compliance with the pension contribution requirements of the law. When the actual enforcement of the law is vested with the tax authorities, the activities of the Audit Unit can assist the tax office in targeting its examinations. If enforcement rests with the SIA, this of course becomes a core function of the Audit Unit.

With branch offices throughout the country, the SIA is in an excellent position to become familiar with the employers throughout the country. This knowledge of the enterprises can be systematically checked against the listing of employers' contribution records. SINs can also be checked against contribution records.

The objective of the Audit Unit in cases where enforcement is by the tax authorities is not a direct enforcement function; however, identification of possible non-compliance and transmission of the information to the tax authorities in an expeditious manner is still the purpose of this activity. Thus, the prime activity must be to identify non-compliance. While such may be discovered by the procedures listed below, it is more likely that employers who are not complying will not submit any contributions. In order to discover such, the SIA should rely heavily on its network of branch offices. The branches should be instructed that they, too, have a responsibility to identify employers and employees who are not complying with the pension law. Without compliance, the new systems will fail and the burdens upon the government and the people will be heavy.

As far as the audit of employer contributions, the auditors should organize their activities using the following procedures:[17]

- Review of employer contributions to identify any changes in the volume of employees.
- Review of employer contributions to identify any changes in the amount of contributions.
- Test check of master listing of SIN to the SIN indicated in the employer's contribution listing.

Coordination With Other Regulatory Bodies

Regulatory resources are always in short supply. Accordingly, it would be most efficient if the SIA could work in harmony with the tax auditors, the bank examiners of the Central Bank and the pension examiners of the Pension Supervisory Agency (PSA). The objective is to have audit specialists in each step of the pension system: that is to say, from the enterprise, to the service bank, to the SIA to the Pillar II and III Funds. Since compliance is the primary objective of all regulatory examiners, the information that each respective specialty brings to achieving a comprehensive overview of the process can not have other than a salutary effect.

Organization of the Audit Unit

The Audit Unit must be given high visibility within the SIA. Accordingly, the chief of the unit should be at the level of a deputy director. The deputy should report directly to the General Director of the SIA.

The operating functions of the Audit Unit should be under the direction of the Chief Auditor. The main function of the Chief Auditor is to direct the planning of audits by coordinating the information available both within and without the SIA. The Chief Auditor should act as liaison with his counterparts in the Central Bank, the Tax Office and the PSA.

[17] It is important to note that the auditor is looking only for activity which is not normal -- this does not necessarily indicate that there is anything wrong, it merely means that the item bears more particular inquiry.

Finally, the Audit Unit will need a staff of qualified and trained auditors. The auditors will conduct "desk audits" (reviews of data generated within the SIA or received from other agencies) and, when indicated, will conduct "on-site" examinations of enterprises (most likely in conjunction with the Tax Auditors).

SUMMARY

The effective administration of pension reform will hinge upon the ability of the SIA to achieve both its internal and external goals. The main external goal is compliance with the pension law. In order for the SIA to play its part in achieving that objective, it must have the capability to generate information and expertise for use in the remainder of the compliance apparatus. Accordingly, it is vital that the government begin now to make the necessary moves to form the Audit Unit and implement the procedures set forth above in order to complete the administrative predicates to successful pension reform.

PART 4:

Implementing Pillar II and III Pension Reform

INTRODUCTION

Once a government has decided to reform its pension system, and considered the initial design, the next task is to develop a plan for implementing the new, reformed system. Design, however, cannot be done without considering implementation. The most perfectly designed system will fail if it cannot be implemented, or if it is poorly implemented.

This section covers:

This section considers private and public pension funds. These are the central supports of Pillars II and III. While both Pillars I and II are made up of mandatory contributions, Pillars II and III are built on a system of individual accounts maintained by private and public pension funds. Click here to see a diagram of A Three Pillar System.

ESTABLISHING NEW PENSION SUPERINTENDENT

PENSION SUPERINTENDENT'S ROLE

The role of the Pension Superintendent is to promote:

- Public confidence in the pension industry by protecting the interests of pension fund participants;
- Saving for retirement and capital formation through pensions; and
- Better informed markets and effective competition within the pension sector.

THE SUGGESTED ATTITUDE

The approach taken by the Pension Superintendent should be:

- *Market oriented*. Market developments should be accommodated and bureaucratic interference in private decision making minimized.
- *Consultative.* There should be close liaison with industry representative bodies, professional associations and consumer groups in order to obtain commercial intelligence, technical advice and community views on policy proposals and administrative measures.
- *Accountability driven.* Trustees, directors and senior executives should be held accountable for the prudent management of pension funds.
- *Effective and efficient.* Suitable powers should be given to the Pension Superintendent so it can monitor the industry. These powers should include timely investigation, intervention and punitive action if necessary. If the Superintendent is to perform its duties effectively, it is very important that it can attract and retain quality staff, which means being able to afford adequate wages.
- *Non-partisan.* The Pension Superintendent should not favor certain funds or individuals. It should be free from political interference and transparent in its decision making.

People often ask where the work on the pension reform should be done – within the current pension department or in a new department? While the staff in the existing pension department can provide valuable information about how the current system works, and its pitfalls, strengths and idiosyncrasies, they typically have no knowledge of other systems around the world or experience of reform. And that's what is needed for a successful reform.

Usually new staff are sought – staff with different qualities to the existing staff – although some of the existing staff may be able to transfer to the new Superintendent's office once it is up and running.

ESTABLISHMENT ISSUES

Once the Structuring the Regulatory Oversight has been decided, and the Functions of a Pension Superintendent specified, the following issues have to be addressed:

(a) *Position*.
- Is this the same reporting structure and level as the Superintendent of Insurance, Banking and other financial institutions?
- Is it a minister level?

(b) *Budget*.
- Is the budget of the Superintendent of Pensions generated independently from a percentage paid by the licensed pension funds?
- Is it a part of the central state budget?
- To whom does the Superintendent present its budget annually?
- It is generally considered more positive if the Superintendent can have its own, self-supporting budget collected from member companies similar to banking, insurance and securities.

(c) *Authority*.
- Can it approve or reject applications to start a licensed fund?
- Does it have authority to assess fines, penalties or other punitive measures for funds that violate the regulations?

(d) *Appointment*.
- What is the length of the term?
- Is it a political appointment?
- Who can remove a Superintendent?
- What qualifications must a Superintendent possess?

(e) *Communication*.
- What is the appeal process to a licensed fund in the event that it disagrees with a ruling of the Superintendent?
- How does the Superintendent meet and communicate with the licensed funds?
- How do licensed funds communicate their reports to the Superintendent
- What reports does the Superintendent issue?
- How does Superintendent communicate with other regulatory bodies?

(f) *Audit*.
- How should the audit process be handled?

IDENTIFYING REQUIRED REPORTING

Key activities of the Pension Superintendent should include:

- Production and public dissemination of an annual report and quarterly bulletins;
- Managing legal representations and litigation on behalf of the Superintendent;
- Monitoring and reporting on industry trends and developments;

- Policy analysis and development of legislation; and
- Managing parliamentary liaison.

The types of information that the Pension Superintendent typically requests to be provided monthly includes:

- Name of fund
- Contact details (address, phone and fax numbers)
- Trustees', founders' or owners' names
- Names and contact details of any external service providers (for example, investment manager, administrator, custodian, auditor) and copies of the contracts with these companies
- Number of participants
- Whether the fund is open to new participants
- Amount of participant contributions
- Amount of employer contributions
- Amount of inward transfers
- Net investment income
- Other income
- Amount of benefit payments
- Amount of outward transfers
- Amount of administrative fees and expenses
- Amount of taxation
- Other expenses
- Balance of pension assets
- Details of how assets are invested
- Any significant changes made to the fund over the last year.

Typically licensed funds will be required to transmit the above information or provide access to their system (by the pension funds providing the Superintendent's office with one or more computers with on-line access to the funds' records).

The benefits of having on-line access is that the Pension Superintendent can:

- Query actual activity for individual participants (for example, compare a participant's payment to the minimum guaranteed benefit);
- Generate a summary of totals by employer and provide reports to other government agencies (for example, the taxation department) on which employers are making contributions;
- Generate summary totals by day, week, etc. for the whole fund;
- Generate statistics on the industry as a whole for publication to better inform both local and international markets and to allow effective competition within the pension sector;
- Generate statistics and tailor-made reports for the government (for example, to be used to justify changes to benefits).

PRIVATE AND PUBLIC PENSION FUNDS

In many countries the success of the pension reform can be attributed to the use of private pension funds rather than a government run monopoly. This has resulted in a competitive market place, with improved service, innovations and competitive pricing for participants.

However, it is understandable that to make the reforms politically viable sometimes the complete removal of the government from the process is not an option. In such cases, government-sponsored organizations can form funds. These government funds then compete with the licensed private funds.

In this case, the following should be remembered:

- DO NOT have a different set of rules for the government funds.
- DO NOT have a different investment policy for the government funds.
- DO NOT have an indefinite period of time for the government funds' existence (either they will always operate or they will terminate when specific events occur – see the definition of a transition period in the following Defining Minimum Requirements of Licensed Funds).
- DO NOT permit the government to collect revenues from all taxpayers to cover the government funds' expenses – only participants of a fund should pay for the expenses of that fund. In other words, create a level playing field.

All pension funds, wherever they are in the world, perform similar functions. Click here to see a diagram of these functions[viii].

This section discusses these functions under the following headings:

DEFINING MINIMUM REQUIREMENTS OF LICENSED FUNDS

The purpose of imposing minimum requirements on companies seeking to establish licensed pension funds is fourfold:

(a) To protect the integrity of the pension industry;

(b) To ensure all legislative requirements are met;

(c) To promote the efficient and prudent management of pension funds; and

(d) To minimize the risk of loss or misappropriation of participants' retirement savings.

Some of the internationally accepted operating standards for pension funds may be too onerous for newly established funds in a recently reformed system. Given this, it is reasonable to include different arrangements during a transition period to allow funds time to develop the required standards.

The end of the transition period could be defined as:

- Once a certain number of years have passed (for example, two years);
- Once assets have reached a certain amount (for example, a set amount or a multiple of expected monthly contributions);
- Once compliance (that is, the percentage of workers making regular mandatory contributions) has reached a certain percentage; or
- Once a certain number (or percentage) of workers have joined a pension fund.

Participant Record Keeping

The aim of the record keeping system should be to store sufficient information to enable all the fund's administration work to be done efficiently and properly, while minimizing the amount of unnecessary information which is kept on file.

The sorts of information that should be kept for each participant is:

(a) Personal

- Identification number used by the fund
- Social security number or similar identification number issued by the government
- Full name
- Address
- Gender
- Date of birth
- Salary
- Employment history
- Marriage and family data

(b) Contribution history

- Contributions received – how much, date received – split by mandatory and voluntary, employer or participant, taxed and untaxed

(c) Account balance

- Balance at start of period
- Investment earnings
- Fees and expenses deducted
- Current balance
- If unitized, number of units, rather than amount, for each item above

(d) Other

- Amount of insured death and disability benefit if applicable
- Names and address of beneficiaries, and details of their relationship to the participant

If possible, it would be important to structure the database so that any information that will be required once the participant reaches retirement age can also be stored. Click here for some examples[ix]

Participant Information

Participants, and prospective participants, should be provided information on the following occasions:

- When considering joining a pension fund;
- On joining a fund;
- At least annually;
- On leaving due to death, transfer, or leaving the country; and
- When commencing benefits, such as at retirement or disability.

In each of these situations, participants (or potential participants) should be given all the information that they would reasonably need for the purpose of:

- Understanding the main services and features of the fund;
- Making an informed judgment about the management and financial condition of the company managing the fund; and
- Making an informed judgment about the investment performance of the fund.

Information to Prospective Participants

Prospective participants need the following information:

(a) Brief introduction to the fund

- Contact details (address, phone and fax numbers, web site, etc.)
- Name of the trustee, founders or owners of the fund
- Details of how to make inquiries or complaints

(b) Main features of the fund

- Statement of significant benefits to which the person becomes, or may become, entitled on joining the fund
- The circumstances in which those benefits would be payable
- The method of working out those benefits
- Brief statement of the taxation of the fund and benefits

(c) Fees and charges

- How fees, charges, expenses and administrative or other operational costs are charged to participants, including the points at which, or occasions on which, they are levied or deducted
- How the fees are determined – whether pre-determined fixed amounts or percentages

(d) Investment policy

- In the case of a capital guaranteed fund, information should be included to explain that the lower-risk/lower-return strategy of the fund may affect benefits in the long term, that there are other investment arrangements that may provide a greater return over the long term, that the person may wish to seek information about the rates of return of those alternative arrangements, and how the fund maintains its capital guarantee and the name of the institution providing the investments that back the fund (if applicable)
- If a fixed-rate option is offered by the fund, information on the prescribed earning rate and the term to which that prescribed earning rate applies
- If a variable-rate option is offered by the fund, information that the earning rate may increase or decrease over time, the actual or notional net earning rate for the option for each year of the previous five years, the compound average of the annual actual or notional rate of net earnings for the option for each year of the previous five years, and a statement that past earning rates are not an indicator of future earning rates.

Information to New Participants

New participants need all the information that prospective participants are given, plus the latest copy of the fund's annual report.

If the new participant is transferring from another fund, the new, receiving fund should issue a confirmation statement to allow the participant to verify that all his/her information has been correctly entered, and all his/her money received.

Participant Statements

The production of annual (or more frequent) participant statements is critical for the success of a new accumulation pension system. Workers must see contributions and investment earnings being regularly credited to their accounts.

Initially, for example in the first two years of the new system, it is a good idea to issue statements more frequently to allow any errors to be corrected. This will be difficult for the newly established pension funds, but ultimately it will make the system stronger and more cost effective as it will always be more costly to rectify errors or if there is a delay in identifying, researching and resolving discrepancies.

Each participant's statement should clearly state the period covered by the statement and include the following information:

(a) Personal information

- Name
- Address
- Identification number
- Date participant joined fund

(b) Brief fund details

- Contact details (address, phone and fax numbers, etc.)
- Details of how to make inquiries or complaints

(c) Movement in participant's account balance during the reporting period

- Balance at the start of the reporting period
- Amount of any participant contributions and date received (mandatory and voluntary contributions should be shown separately)
- Amount of any employer contributions and date received (mandatory and voluntary contributions should be shown separately)
- Amount of benefits transferred into the fund and date received
- Amount of withdrawals and date withdrawn
- Amount of fees deducted by the fund and date withdrawn
- Amount of any net earnings and date credited
- Balance at the end of the reporting period

If the fund is unitized, the above items may be shown as numbers of units rather than currency figures. The unit value at the end of the reporting period should be shown, along with the currency value of the participant's account.

(a) Participant's benefits

- Leaving benefit at the end of the reporting period (if different to the account balance)
- Method by which that benefit is calculated
- Amount payable in the event of the participant's death at the end of the reporting period
- Participant's beneficiaries as held on file – their names, address and relationship to the participant. The participant should notify the fund of any amendments.
- Amount of other significant benefits, including disability benefits, at the end of the reporting period

(b) Other information

- Rate of any net earnings during the reporting period (net amount paid to the account)
- If the fund is aware of any contributions that are due and payable during the reporting period but have not been paid to the fund, the amount of those contributions and of action that the fund has taken, or proposes to take, to have the contributions paid

Click here for some examples.[x]

Annual Report

While a participant's statement provides information on his/her personal stake in the fund, it is also necessary to provide information on the overall management and financial condition of the fund and the investment performance. This would include the following:

(a) Fund details

- Contact details (address, phone and fax numbers, etc.)
- Name of the trustee, founders or owners of the fund
- Statement that further information is available on request
- Details of how to make inquiries or complaints

(b) Financial information

- Audited fund accounts
- Auditor's report

(c) Investment policy

- Description of the investment strategy

- Details of the investment objectives
- Name(s) of the investment manager(s)
- Statement of assets at the end of this and the previous reporting periods that includes all information that a participant would reasonably need to understand the asset allocation
- Details of each investment that has a value in excess of, say, 5 percent or 10 percent of the total assets of the fund
- Actual or notional rate of net earnings in each of the most recent reporting periods that, in total, constitute a period of at least 5 years and the compound average actual or notional rate of net earnings for the period of 5 years ending at the end of the reporting period;
- If the net earnings of the fund are allotted to participants' accounts, the manner in which the allotment is made

(d) Fees and charges

- Actual fees and charges imposed
- How fees, charges, expenses and administrative or other operational costs are charged to participants, including the points at which, or occasions on which, they are levied or deducted
- How the fees are determined – whether pre-determined fixed amounts or percentages

On Leaving the Fund

On leaving the fund for whatever reason (except death), the participant should receive the following information:

(a) Fund details

- Contact details (address, phone and fax numbers, etc.)
- Statement that further information is available on request
- Details of how to make inquiries or complaints

(b) Movement in participant's account balance since the last statement

- Balance at the start of the reporting period
- Amount of any participant contributions and date received (mandatory and voluntary contributions should be shown separately)
- Amount of any employer contributions and date received (mandatory and voluntary contributions should be shown separately)
- Amount of benefits transferred into the fund and date received
- Amount of withdrawals and date withdrawn

- Amount of fees deducted by the fund and date withdrawn
- Amount of any net earnings and date credited
- Balance at the date of leaving

If the fund is unitized, the above items may be shown as numbers of units rather than currency figures. The unit value at the end of the reporting period should be shown, along with the currency value of the participant's account.

(a) Participant's benefit

- Leaving benefit at the date of exit (if different to the account balance)
- Method by which that benefit is worked out

(d) Other information

- Rate of any net earnings since the last statement
- If the fund is aware of any contributions that are due and payable since the last statement but have not been paid to the fund, the amount of those contributions and of action that the fund has taken, or proposes to take, to have the contributions paid

If a person ceases by death to be a participant of a fund, the fund should give to each person receiving a benefit from the fund a statement similar to the above, but showing the death benefit rather than the leaving benefit.

If the participant is transferring to another fund, s/he will receive a confirmation statement from the new fund, which s/he should then check against his/her leaving statement from the old fund.

Account Maintenance

Once the administration software system has been established (see Participant Record Keeping) and the participants have been enrolled, the next task is to maintain the participants' accounts. This means that the software system must be able to cope with participants changing their names, addresses, spouses, employers, etc.

Security, Controls and Audits

The administration software system and operational procedures must ensure that the integrity of the participants' information and accounts is fully protected at all times. This means putting in place some basic standards:

- The software system should be password protected with the passwords changed regularly.

- People who do not need write access should not be granted it. Where read-only access will suffice, use it.
- The system should contain a computerized transaction log which records all the changes made to a participant's account, who made them and when they were made.
- Regular, daily reconciliations should be done between the participant record keeping system and the fund's bank account and investment manager (see Transaction Settlement and Reconciliation).

Fees and Charges

Establishing a pension fund can be very costly, so much so that a fund should only be established if it is likely that it will grow to such a size that economies of scale make it a feasible venture.

Activities that the fund must perform include:

- Educating prospective participants;
- Marketing;
- Joining up a new participant, including the agent's role if appropriate;
- Routine maintenance of a participant's account;
- Processing a participant's contributions;
- Investing a participant's contributions;
- Producing a participant's regular (quarterly/annual) statement;
- Responding to a participant's inquiries;
- Transferring a participant's balance to another fund;
- Processing a participant's benefit on death or on leaving the country; and
- Processing a participant's benefit on retirement.

The regulations and guidelines covering the establishment of a new pension fund should include a requirement for a business plan. As part of this, the new pension fund should complete an activity analysis to determine what activities the fund staff will be doing and how much each activity is expected to cost.

There are various methods for charging fees:

- Percent of each participant's monthly contributions
- Percent of each participant's salary
- Percent of the investment income earned by each participant
- Percent of each participant's account balance
- Fixed dollar amount each month or per transaction

The most appropriate fee for each activity will be a function of whether the activity is dependent on the amount of money involved.

Transactions that depend on the amount of money involved include:

- Marketing (the fund will probably spend more on trying to attract high net worth individuals than on below-average income workers);
- Investing contributions;
- Transferring money to another fund; and
- Paying out benefits (as assets will have to be converted to cash).

Activities that are independent of the amount of money involved include:

- Joining up new participants;
- Routine maintenance of participants' accounts;
- Processing contributions;
- Issuing regular statements or information on demand;
- Responding to inquiries; and
- Overheads (wages, utilities, etc.).

The actual fees that the fund can charge are usually stipulated in the law and may not match the fund's desired fee arrangement. However, if the fund has done its own analysis, it can then try to structure its marketing campaign (and its target participant profile) so that actual fees are expected to equal or exceed required fees.

It is important to understand that if fees are limited, the fund's resources will also be limited. For instance, if a maximum fee is imposed for record keeping, the quality of services provided may be lower than would otherwise be the case. This may affect the accuracy of the records.

Following the reform, when workers are still relatively uneducated in financial matters, the fee structure stipulated by the law should be:

- Easy for participants to understand;
- Easy for participants to compare across funds; and
- Transparent.

Once workers are used to the concepts of the new pension system (having a separate account in their name, investing their contributions, comparing funds, etc.) the fee structure can be opened up, as in most Western countries.

Click here to see some real-life examples[xi] of the fees charged in different countries.

Portfolio Valuation

The trend in fund valuation is to perform daily valuation. There are many reasons for this:

- It is expected that thousands, or even millions, of employers will contribute monthly, which means the fund will receive contributions at different times during the month, probably resulting in daily transactions within the fund.
- It is likely that the fund's investment portfolio will be traded daily.
- Paying daily benefits has some enormous value as not all the payments have to occur on a specific day.
- Technology allows daily valuations to be done fairly easily.

Daily valuation may be something that is transitioned into. Regulators can encourage daily valuations initially, but state that at a specified time all funds must value daily.

Click here to see a diagram showing the process for determining unit values[xii].

Transaction Settlement and Reconciliation

As for valuations, all transactions have to be settled daily. For example, if 20 employers make contributions on Monday, all the contributions have to be logged in, processed and earnings credited *effective* Monday.

The Pension Superintendent should impose time requirements on various administrative transactions, for example:

- All contributions should be processed within one to three business days.
- All properly documented benefit claims should be processed and payments should commence within, say, 30 days.

Contributions should be reconciled in four places:

(a) At the employer – where checks should be made to ensure to see that it has correct amount of each type of contribution (employer and worker, taxed and untaxed, mandated and voluntary);

(b) At the contribution collection point – where checks should be made to see that the totals from the employer equal the amount of money sent (or, better yet, debited from the employer's bank account);

(c) At the receiving fund – where checks should be made to see that all contributions received equal the amounts credited to participants' accounts; and

(d) At the investment manager – where checks should be made to see that the correct amount of contributions is invested.

DEFINING THE LICENSING PROCESS

The previous section discussed the minimum requirements for a licensed pension fund. Once a fund has put in place all these standards it should prepare to apply for a license. This usually involves applying to the Pension Superintendent.

If the applicant company meets all the legal requirements for the issue of a license, the Pension Superintendent will grant it a license. Thus, it is critical that the Superintendent should design the requirements so that it is impossible to meet the criteria but still lack the capacity to operate the pension fund in a way that will protect participants' benefits.

While the legislation will provide for the cancellation and suspension of a license if a fund fails to continue to meet the requirements of a license, such a cancellation or withdrawal may not be easy to achieve. It is therefore preferable to reduce the possibility of future problems as far as possible by taking particular care in the assessment of license applications.

The Superintendent should be satisfied that a fund will operate prudently and properly by insisting it demonstrate it has:

- Financial strength;
- Demonstrated experience in pension administration and asset management;
- Distribution network;
- Suitable organizational structure staffed by personnel who are qualified and appropriately remunerated;
- Adequate computing equipment and appropriate software for the volume of business anticipated;
- Appropriate procedures in place, and well documented, for their administration and investment operations – receiving contributions, checking for errors, investing the assets, deducting fees and expenses, reconciling the cash flows, etc.; and,
- Realistic business plan.

The Pension Superintendent should not just accept written statements, but should verify the claims of the fund, for example:

- Validate that the proposed fund has a computer system;
- View the system so the proposed fund can demonstrate how the system meets the record keeping requirements;
- Require a signed statement by the proposed fund's owner that it meets all required regulations or ordinances;

- Require a copy of the proposed fund's procedure manuals and interview the fund's staff to see how aware they are of the manual's contents;
- Require a copy of the agreements with service providers (auditors, accountants, banks, etc.); and
- Require a copy of the proposed fund's business plan and review the qualifications of the management personnel.

IDENTIFYING WAYS TO OPERATE EFFICIENTLY

For the pension industry to operate efficiently, the various parties within the industry have to operate efficiently.

The pension funds should:

(a) *Establish procedures for finding and correcting errors as early, and as easily, as possible.* For example, discrepancies can occur between the amount of contributions paid to a fund and the total amount shown on the paper listing accompanying the payment. This should be picked up before the money is credited to the fund's bank account and returned to the employer.

(b) *Write automatic checks into their administration software.* Humans are not as reliable as computers when it comes to checking, and much time can be saved by having the system automatically check fields. For example, dates of birth of contributing participants should be mathematically verified to ensure the participant is a reasonable age, for example, not below 15 years or above 65 years.

(c) *Automate regular processes.* For example, standard reports required by the government should be automatically prepared and transmitted by the administration system.

(d) *Streamline processes.* Wherever possible, each piece of paper should be handled only once by the relevant staff person.

The Pension Superintendent should:

(a) *Only request information that it will use or check.* It is tempting for the Superintendent to collect as much information from the pension funds as possible, especially when the industry is new and shrouded in mystery. However, this is time consuming for the funds to prepare and, unless it is used for monitoring the industry or checked against data sources elsewhere, it serves little purpose. The result is just to increase the cost of the Superintendent to the taxpayer/citizen/worker.

(b) *Publish information that is useful to the industry*. One valid reason for collecting data from the funds is if it is to be used to prepare reports and summaries for the pension industry. Information which would be useful includes the following, shown for the industry as a whole and for each fund (if appropriate):

- Number of pension funds
- Number of participants and proportion of workforce participating in a pension fund
- Total contributions collected
- Total benefits paid
- Fees and charges
- Total assets
- Rate at which total assets are growing
- How assets are invested
- Rate of investment return

(c) *Test funds prior to licensing them*

See Defining the Licensing Process for details.

IDENTIFYING WAYS TO ENSURE A COMPETITIVE MARKET

The best way to encourage competition is to encourage disclosure. This means publication of a fund's fees and charges, investment returns, owners or sponsors, size and services. The goal should be that if a participant is concerned about an issue, there should be a way for him/her to easily compare funds.

Some countries have actually standardized a table summarizing all fees, investment returns, assets and services. Funds can publish more if they choose, but all funds must disclose these minimum issues.

The other way to ensure a competitive market is to make sure all funds – both government sponsored and privately owned – are competing on a level playing field. The introduction to Private and Public Pension Funds explored this issue in some detail.

Finally, governments must consider what incentives they have structured into the reform to encourage reputable, well-managed financial institutions to participate in the pension system.

CONTRIBUTIONS

Pillar II and III programs share a unique feature in that the contributions made into them need to be continually monitored as part of the permanent records of workers' contributions and benefits through the life of the accounts.

By contrast, under Pillar I, there is no separate account in which workers' contributions accumulate. No annual statement or other report is even typically issued to the worker or enterprise.

The main characteristics of Pillars II and III are:

(a) Contributions are tracked and distinguished by originating source, such as employer or worker.

(b) Contributions accumulate and generally are invested in an individual account in each worker's name.

(c) Workers may select the licensed fund of their choice in which to direct their contributions and have the opportunity to transfer among the funds over the life of the accumulation period. All records must be accurately transferred with the worker's balance.

(d) Workers receive regular reports indicating how much has been contributed, how much has been earned in investment income, and the account's present value.

(e) Workers have control over the value of their account by being allowed to make voluntary contributions *on top* of what has been mandated by law.

(f) Enterprises may also make voluntary contributions *on top* of what has been mandated by law, typically as a form of additional, non-taxable compensation.

(g) Workers can control when they begin to withdraw from their account, once age and service requirements are met ***or*** once their account values reach a certain minimum balance.

This section describes:

- Transmitting Contributions
- Contribution Collection: Centralized Versus Direct Transmittal
- Commonly Asked Questions

Methods of reporting contributions to workers are provided in sample statements[x].

TRANSMITTING CONTRIBUTIONS

Employers collect the contributions that they finance, plus those that the worker has also been mandated to contribute or chooses to voluntarily supplement. They then transmit one single amount along with a description of the contributions.

This total is generally detailed in a prescribed format. Each employer cannot be given the option of whether to transmit data and funds, and in which format. The transmittal information being properly communicated in an accurate and timely manner to the contribution collection point is one of the most important success factors to the acceptance of the reform by the general population.

A properly transmitted program will produce the following benefits:

- Correct contributions will be reflected on workers' account statements;
- Processing costs will be lower for employers and licensed funds which ultimately means that lower costs will be paid by the workers and there will be lower evasion on the part of employers;
- The reform will have higher credibility with the population; and
- Experienced, high quality financial institutions will participate in the reformed pension system.

An improperly set of data conversely will produce the opposite results:

- Higher costs – anything costs twice as much if it has to be done twice;
- Inexperienced, financially weak institutions will form licensed funds;
- Lack of cooperation by employers as they will not really expect that their information will be processed correctly;
- Lack of confidence by the working public; and
- Criticism by politicians that the implementation was not carried out correctly.

CONTRIBUTION COLLECTION: CENTRALIZED VERSUS DIRECT TRANSMITTAL

Where should the contributions be sent? There are two basic models. See illustration[xiii].

The first model, employed by the mandated and voluntary schemes of Chile, Bolivia, Australia and Hong Kong, and the voluntary pension schemes of the United States, Canada, Bulgaria and Hungary, has all data and amounts directly transmitted from the employers to the licensed pension funds. In this scenario if one employer has 2,000 workers who have selected a total of eight licensed funds, that employer must track and monitor each workers' fund selection, and then each month send eight transmittals and correctly forward contributions as well. This can be difficult and cumbersome for the employer (and sometimes too tempting for them to retain the money).

The second scenario has all data and all contributions transmitted instead to a central collection source, which is the only unit responsible for tracking and monitoring which licensed fund each worker has selected. That unit is typically charged with reporting to the tax authorities which enterprises are correctly paying social taxes. In Poland, this is ZUS, the old pay-as-you-go system that will function as the central collection source and in Romania it is proposed that a special administrative body called CASA be created for this purpose. In Argentina it is the central tax authority, and in Kazakhstan it is the administrative unit of the pay-as-you-go system. Click here to see a diagram of the Kazakhstan system[xiv].

Commonly Asked Questions

How long should licensed pension funds maintain contribution transaction histories?

It is vital that a worker's contribution transaction history can be reconstructed. The record keeping functions of the fund are technical and quite complex, and must be accessible until the account value is depleted. In many countries, regulations commonly require that accessibility to data extend three years past the date of the last amount paid, which is a good idea.

How long is the life of the worker's account?

Typically more than 50 years for new workers entering the workforce, but less for those who are already working when the reforms are enacted.

Since it is not sensible, however, to have one computer system for older workers and another for new workforce entrants, the one record keeping system will support all workers' accounts of each licensed fund. The system must be expansive enough to support all needs.

For example, a worker begins to contribute to his/her individual account when first entering the workforce at age 21. S/he accumulates contributions until age 65, a period of 44 years. At age 65 the benefit payments begin and are paid until s/he dies at age 75. The worker's spouse begins to receive survivor benefits at the time of the worker's death (spouse's age 68) and continues receiving benefit payments until age 75.

In this example the records must be maintained for over 60 years. This is not an extreme example but a realistic reflection of an accumulation and payout period.

What happens when workers transfer their account balance from one licensed fund to another?

All the historical data needs to be transferred as well.

The worker will not maintain further contact with the former licensed fund, and since the new fund will need to know specific information about the worker's history at some point, all the worker's historical data must be available to them.

It is appropriate that regulations stipulate that all data must be transferred within a specified number of days and must be transmitted at the time the money is moved. Typically, 30 days advance notice is adequate.

Is it possible that proper record keeping of worker accounts can be completed on spreadsheets such as Excel or Lotus?

No. Companies that attempt to do this are generally inexperienced and unknowledgeable of record keeping.

When such shortcuts are attempted, they tend to fail and the results are counterproductive to the credibility of the system:

- Data may be lost and may not be recoverable.
- Incorrect data may be reported to workers, who in turn will demand higher support from the licensed pension fund company personnel to explain the errors.
- The cost of record keeping will generally skyrocket as transactions must be processed, removed and researched for correct assignment and finally reprocessed. Anything that must be done and redone will always cost more than if transacted properly the first time.
- Worker and enterprise confidence in the government's ability to implement the reform will be lost.
- Accounts will be subject to higher risks of embezzlement, fraud and errors, and it is difficult to monitor and confirm transactions when they are not balanced.
- Higher cost will be incurred by the Pension Superintendent as it attempts to supervise transaction processing which is difficult, if not impossible, to audit.

It is not advisable for the Pension Superintendent to regulate the name of the software package that must be used by licensed funds. It is appropriate, however, that the Superintendent stipulate:

- Specific records that must be maintained;
- How many years an active transaction history must be on file for immediate access; and

- For how many years records are stored in easily accessible off-line files. “Easily accessible” should be defined as taking no more than three business days to obtain.

Click here to see examples of acceptable timeframes[xv].

How many transactions are generally recorded on a worker's account each year?

Typically there are 12 monthly contributions, however some record keeping software systems will process one transaction in several parts. For example, there is one monthly contribution for each worker but it may consist of three types of contributions – worker mandatory, worker voluntary and employer voluntary. In countries in which there are multiple investment options permitted for each worker, these contributions are then allocated among the correct options.

While this may seem complex, computers ensure the accurate and efficient processing of the data.

Are there software packages available and already in use?

Yes. There are several reliable software firms that provide this type of record keeping software – already designed, tested and fully implemented in over 20 countries worldwide.

There are over 5,000 licensed pension companies and financial institutions worldwide that use these retirement record keeping software services. It is a strong, viable industry. Its members are highly motivated to work with government officials and financial institutions as they proceed with reforming their mandated pension systems.

BENEFIT PAYMENTS

The other side of collecting and administering contributions is paying benefits. Generally, the benefit payments of the pension equation are managed by the insurance industry. Thus pension funds are responsible for the accumulation side of an annuity and insurance companies are responsible for the payout. Since the ultimate goal of a pension system is the accurate and responsible payment of benefits it is imperative that the insurance industry be financially stable and well regulated.

Paying life annuities means assuming two risks – investment return risk and mortality risk. Typically only insurance companies are in a position to assume these risks, and so pension funds are allowed to pay either:

- A lump sum amount to an insurer, which is then used to purchase a life annuity for the participant, or
- A fixed amount to the participant each year (defined by the government).

Under the first scenario, it may in fact be the pension fund that makes the payments to the participant on behalf of the insurer, but the insurer will be assuming the risk.

This section outlines the steps to develop the benefit payment system.

- Developing the Process for Claiming Benefits
- Designing the Procedures and Establishing Benchmarks
- Designing the Required Reports

As explained earlier in Specifying Events Leading to Benefit Payments, the following events usually lead to benefit payments:

(a) The participant reaching retirement age.

(b) The participant qualifying for early retirement.

(c) Death of the participant.

(d) The participant becoming totally and permanently disabled.

(e) The participant permanently leaving the country.

(f) The participant suffering financial hardship.

(g) The participant transferring to another pension fund.

(h) Death of a current pensioner.

DEVELOPING THE PROCESS FOR CLAIMING BENEFITS

Workers will need to be told how they should claim their benefit under the new system. This is the chance to clearly demonstrate how government and private industry have together made an improvement in the processing of claiming and being paid benefits.

The process for claiming benefits is briefly:

- The participant must show evidence that the event has occurred;
- The pension fund must satisfy itself that the event has occurred;
- The pension fund must calculate the participant's benefit; and
- The pension fund should pay the benefit (or make arrangements for the payment of the benefit).

All benefit requests should be made using standard forms. These should either be stipulated in the legislation, or agreed to by all the licensed funds, so that each fund requests the same information.

This process is slightly different for each event:

(a) *Retirement*.

- The participant should complete a standard form requesting payment of a retirement benefit. It is expected that such a form would be defined in the law or by the Pension Superintendent.
- The pension fund should then provide the participant with information about the balance of his/her account. If the pension fund is permitted to pay pension installments, it should also provide information about how much the participant could receive from the fund each year.
- Either the participant or the fund (as stipulated in the law) should request quotations for life annuities from insurance companies based on the participant's account balance. The participant should be provided with the quotations and should select which option s/he will take.
- If the participant chooses to receive money from the fund, the fund should start paying the pension. If the participant chooses a life annuity from an insurance company, the full balance should be paid over to the relevant insurer.

(b) *Early retirement*.

- The procedure for early retirement is similar to normal retirement.

(c) *Death*.

- Usually the fund will find out about the participant's death when one or more beneficiaries notify the fund. They should provide a death certificate as proof of death.
- The fund should have details of all the participant's beneficiaries (their names, addresses and relationship to the participant). This information should have been supplied by the participant on joining the fund, and updated by the participant at least annually on receipt of his/her personal statement. All the known beneficiaries should be notified of the participant's death and allowed to claim for a part of the participant's benefit. The onus to claim is on the beneficiary – it should not be the fund's responsibility to make sure that everyone who could claim has done so.

  Click here to see more on death benefits[xvi] which are a rather complex issue.

- One possible arrangement, used in some countries, is that if a wife dies, her balance is paid to her husband's account in his pension fund. Alternatively, half could be paid to her husband's account and half paid as a pension to her dependent children. Other variations of this are, of course, possible. Alternatively, the participant's account is used to purchase annuities for all his/her beneficiaries.

(d) *Totally and permanent disablement*.

Click here to see a discussion of the payment of disability benefits[xvii] which, like death benefit[xvi], are quite a complex issue.

- The law or the Superintendent will typically specify what documentation defines supporting evidence (laboratory results, tests, treatment and other supporting documentation) demonstrating that the participant is permanently disabled.
- The pension fund will then pass along the participants' request (with substantiating documentation) to another group (for example, Minister of Health) or it will be authorized to determine itself if the claim is valid – either the disability pool or the Pension Superintendent.
- Valid reasons for rejecting the participant's claim would include:
  – the participant's disability not being judged "total" or "permanent" by the appropriate group (either the Health Ministry or the licensed fund);
  – the participant's failure to meet the support documentation requirements;
  – the disability being covered by workers' compensation or state benefits; and
  – the participant dying during the disability evaluation and qualification period.
- If the claim is declared valid (by the appropriate group), the Superintendent should require the fund to transfer the full balance of the participant's account

to the disability pool, or hold onto the participant's account and accept future contributions from the pool.

(e) *Permanently leaving the country*.

- Evidence that the participant is permanently leaving the country would typically include a one-way air ticket, documentation that property is being sold or rented, receipts showing that furniture is being shipped, and a signed declaration from the participant.
- The law or the Superintendent must define what constitutes sufficient documentation to support the participant's claim.
- Typically the participant would receive the full balance of his/her account, paid within the required number of days once the request is received in good order.

(f) *Financial hardship*.

- Typically the law or the Superintendent would require that the claiming participant complete a standard questionnaire to provide details of money earned and expenses due. These requirements would make it reasonably difficult for a participant to receive his/her money unless they truly are suffering financial hardship. Click here for Examples[xviii]
- The law or the Superintendent will stipulate that the fund accepts that financial hardship is being suffered if the participant satisfies the requirements.
- This event usually only triggers payment of the participant's voluntary contributions, with investment earnings. Mandatory contributions are usually held for retirement but may also be released in extreme cases.

(g) *Transfer*.

- The Superintendent should require that each fund provide a form that the participant complete to authorize a transfer.
- The Superintendent should require that new fund contact the participant's old fund, using the form completed by the participant and countersigned by the fund to initiate the transfer within the prescribed number of days.

(h) *Death of a Current Pensioner*. If a current pensioner dies, typically a funeral benefit is paid to encourage the family of the participant to report his/her death. The payment should be sufficient to achieve this purpose, but not so high that it encourages mariticide, uxoricide, fratricide, sororicide, matricide or patricide (click here for a translation[xix]!). An appropriate level would be twice the minimum benefit, which should be more than one month's annuity payment.

DESIGNING THE PROCEDURES AND ESTABLISHING BENCHMARKS

As mentioned in Transaction Settlement and Reconciliation, the Pension Superintendent should impose time limits on various administrative transactions. For example, all properly documented benefit claims should be processed and payments should commence within 30 days. It may be reasonable to allow time periods twice as long for the settlement of death and disability claims as these require more investigation on the part of the pension fund to ensure the benefits are paid in good faith. But any longer will cause severe hardships for the recipients, resulting in them going on the public dole. Also, it is vital that claims be processed quickly and efficiently so that the image of widows and orphans waiting for money cannot be used to bring down the system.

DESIGNING THE REQUIRED REPORTS

The Pension Superintendent must define the parameters of benefit payments to ensure that participants' pensions are:

- Paid in a timely manner;
- At least equal to the minimums set by the law;
- Within the restrictions set out in the law (for example, that pension funds are not paying life annuities; that annual withdrawals do not exceed the legal limits); and
- Only paid when certain events occur (see Specifying Events Leading to Benefit Payments).

To monitor these things, the Superintendent will require regular (monthly or quarterly) information from the pension funds including, for each disbursing account:

- Amount paid;
- Form of payment (annual withdrawal or payment to insurer);
- Event leading to payment (attainment of retirement age, certified permanently disabled);
- Minimum benefit applying to that participant; and
- If there is a limit on the annual amount that can be paid from that account, then the relevant limit.

Implementing Guarantees

An important thing to remember about guarantees is that they cost money. If the government offers guarantees, it is the taxpayers and participants who ultimately must pay for them, regardless of whether or not they actually benefit from the guarantee. See Guarantees for more information.

Developing a Method for Integrating Guarantees

The Pension Superintendent must ensure that it collects sufficient information from the pension funds to allow adequate verification that participants are receiving their guarantees. This means collecting information on either the investment returns or participants' level of benefits (see Designing the Required Reports for more information).

INVESTMENT MANAGEMENT

In developed countries, governments typically regulate pension systems, mandate contribution percentages and, to some extent, record keeping requirements, but leave investment management to the investment managers.

This is not to say that investment management is totally unregulated because the managers are usually monitored by a standard governmental agency – similar to the Securities and Exchange Commission in the U.S. – and by self-regulating industry bodies such as the National Association of Securities Dealers.

This section discusses the following topics:

- Developing an Investment Policy
- Monitoring Compliance
- Offering Investment Choice
- Making the Transition
- Charging Fees
- Using a Custodian

DEVELOPING AN INVESTMENT POLICY

All around the world governments stipulate investment policies for managing pension assets. The same policy may apply to both mandated and voluntary contributions. The pension law or regulations generally define allowable and prohibited investments in certain securities, real estate or gold, but largely the entire universe of stocks, bonds, international securities, derivatives, mortgage securities is permitted. The decision regarding the number, quality and type of securities purchased is made by the investment manager. Click here to see a diagram showing the asset selection process[xx].

In newly reformed pension systems governments tend to more strictly regulate investment policy for pension fund managers. There are several reasons:

- The emerging-economy capital markets are under-developed, resulting in fewer domestic options and a lack of liquidity.
- The government wishes to maintain control over the amount of money leaving the country. There is a general government distrust of foreign investments, as well as a desire to use the money generated by pension savings to finance local infrastructure projects. Resulting in a promotion of, or even mandate to buy, government bonds.
- Politicians and central bank officials are keen to show workers that their money will be "safely" invested in government bonds and central bank securities.
- There is a lack of sophistication among the political decision-makers to evaluate the risk/reward trade-off.

- Since the government guarantees in one form or another the final benefit, it feels an obligation to control investment policy.

Finally, the pension assets, in a relatively short time, will represent the single greatest predictable source of cash into any developing country's capital markets. There is great political risk for regulators and legislators if they bungle the investment policy. Thus they tend to want to “oversee” and “protect” workers’ retirement savings.

Historically around the world, politicians, regulators and supervisory authorities have erred on the side of more, versus less, control of the investment policy. This has frequently resulted in limited investment returns for workers’ savings.

Another common problem has been limiting the investment so that the diversification is small, or nonexistent. This has resulted in higher portfolio risk as the contributions are spread out among only a few investments. If any one of them has a downturn, the impact on the overall portfolio is strong. Increasing the number of allowable securities increases the opportunity to spread the risk.

Returns on internationally diversified portfolios, with a better balance of country and currency risks, have proved more stable than non-diversified portfolios. In addition, investment managers now have access to effective instruments for hedging their foreign-currency positions. Also, investment managers have historically tended to be relatively conservative in those countries where no restrictions exist on international portfolio investments.

Types of Assets

A properly structured investment policy will be clearly defined to include acceptable ranges of investment by different types of assets. A policy typically classifies investment by type (equity or bond, international or domestic and short or long term) and by quality (high quality may limit opportunities for up-side growth and mid to low quality may put principal at risk of fluctuation) such as:

- Government bonds,
- Central bank issues,
- International bank issues (World Bank bonds, bonds issued by Inter-American Development Bank, Asian Development Bank, African Development Bank, etc.),
- Domestic equities,
- Foreign equities (developed markets),
- Foreign equities (emerging markets, maybe even regional to the area of the reform),

- Foreign corporate or government bonds:
  – Short-term or less than one year (developed markets),
  – Short-term or less than one year (emerging markets),
  – Long-term or greater than one year (developed markets),
  – Long-term or greater than one year (emerging markets), and
- Investments in pooled funds (mutual funds).

Click here for examples of assets that are typically allowed to be used by pension funds and those that are typically prohibited[xxi].

Investment Class Limits

The investment allocation is then limited within these classification categories. A high-end and low-end limit is desirable. For example, no more than 50 percent, and no less than 10 percent, in domestic equities. Click here for more examples of investment restrictions[xxii].

The purpose of having both low and high-end ranges defined is to add some certainty to the process. One can calculate the cash flow of a mandated pension system, compare the investment restriction ranges, and then project a reasonable estimate of the amount of money that will be directed to each category. In addition a certain amount of diversification becomes mandated as well as issues such as conflict of interest become addressed.

It is common to have these ranges identified separately during a reform's early, transition years. For example, in year one, a minimum of 25 percent of all contributions could be directed to government bonds. In year two that amount could decline to 20 percent, with a 5 percent decline each year thereafter. The goal is not to induce less money to be invested in government bonds, but rather to lower the mandate. As a result, there may be an increase in the amount of investment directed to other options, even though the same amount may be invested in government bonds (as contributions increase and the percentage of the required portion is adjusted downward).

Issuer Limits

The regulations should define investments by issuer limits, with the exception of government bonds:

- Percentage limit by any one issuer (company or affiliated companies), and
- Percentage limit by an industry.

Quality Rating Limits

The regulations should define investments by quality rating limits. The regulations should include a definition of "quality" by internationally accepted standards such as Standard & Poor's, Moody's and Duff & Phelps. Again the use of low- and high-end limits should be used. For example, not less than 10 percent of all long-term bonds must be AAA rated, and between 10 percent and 20 percent may be as low as ABB rated.

MONITORING COMPLIANCE

Each fund's compliance must be monitored by tracking investments against each restriction, in both currency figures and percentages of total assets. Click here to see an example[xxiii].

Re-Balancing to Maintain Compliance

Each day the relative value of each asset in the fund's portfolio can, and generally will, change. This can happen by:

- Accident, for instance, if the portfolio manager trade results in the limit being exceeded by issuer by industry; or
- Market adjustment, for instance, when the market corrects itself, and the portfolio is then overweight in stocks because the markets are in a bull run.

This will mean that from time to time the fund will not comply with the investment restrictions.

Reporting and Auditing

The Pension Superintendent described earlier has jurisdiction over the pension fund and the management of its assets. Typically, pension funds are required to value assets daily and submit reports to the Superintendent by the next business day. These reports contain elements such as:

- Assets of the fund,
- Securities held (on a grid similar to that shown in Monitoring Compliance),
- Change in asset value from the previous day,
- Change in securities comprising the fund,
- Number of worker accounts, and
- Fees charged, if any.

In addition, other groups may require access to information about pension funds' investments. In such cases it is advisable that the pension funds supply information to one agency, generally the Pension Superintendent, and that agency then forward on information as required by others. This avoids similar agencies requesting similar information but in slightly different formats which will increase the cost to the taxpayer. Examples of other groups that funds may need to provide information to at regular intervals:

- Central Bank,
- Securities and Exchange Commission, and
- Tax Office.

Fund Performance Disclosures

The Superintendent should require the pension funds to regularly disclose past investment performance figures to both current and prospective participants. This is discussed in detail in Participant Information.

However, the performance should not be calculated over such a short period of time that workers are encouraged to "rate chase" and change funds often in an attempt to always be in the highest performing fund. A more logical method is to require that pension funds report investment performance, after fees have been deducted, based on a rolling 12 or 24 month period.

OFFERING INVESTMENT CHOICE

The pension law and regulations should allow licensed pension funds to offer more than just one investment option to workers for their retirement savings. Workers should be allowed to pick investment options based on their current age and time-horizon. It is a high-risk alternative to lock a 20-year-old into government bonds and prevent them from enjoying growth-related returns that would be earned by investing in the stock market. Similarly requiring a 60-year-old worker close to retirement to be invested in long term assets in which there is fluctuation of principal does not make sense. There is no such thing as a "one size fits all" portfolio.

Mexico has organized its system of licensed funds to permit multiple portfolios, targeted to different ages and risk tolerance levels.

The Power of Returns

The power of investment returns should not be understated. Over a 20 year period or greater, it is a generally accepted international standard that the rate of return has greater impact on the value of a worker's account than the contribution rate.

Consider a worker aged 30 who has 30 years to go until retirement and who contributes 10 percent of salary each year. If the worker can earn a real rate of 14 percent p.a. instead of 4 percent p.a. s/he will have 7 times as much money at retirement. Click here to see a graph[xxiv] showing the impact of the investment return on the final amount available at retirement.

Another way of looking at the situation is to consider the same worker who earns a real return of 4 percent p.a. If s/he could earn a higher rate of return what contribution rate would be required to have the same amount at retirement? A real return of 14 percent would mean s/he could reduce his/her contribution rate to only 1.4 percent of salary and still have the same amount at retirement. Click here to see a graph[xxv] showing the required contribution rates.

Managing Risk

Historically risk and return have gone hand-in-hand. Equities have offered higher long-term returns, but they have fluctuated more over the short term. Fixed income investments (like bonds) have been more stable, but they have produced lower long-term returns. By forcing workers to avoid risk in favor of investments that "protect" their money, governments are increasing the chance that workers will miss out on the opportunity to earn more money. So called "safe investments" may protect workers' savings, but if the returns fail to keep pace with inflation playing it safe becomes a risk. People willing to take some risk are typically rewarded with greater returns over the long term. And saving for retirement is a long-term process for most workers, and higher returns mean more money in retirement.

Risk can be managed:

- *Spread risk around.* Financial markets do not all move together. Some are going up while others are going down. Diversification – that is, owning different types of investments – is a proven strategy to protect a total investment portfolio from significant losses. Risk is limited by averaging out the lows in one market with the highs in another. For this reason, pension funds should be allowed to spread their investments as widely as possible, including foreign assets.
- *Do not try to time the market.* Even investment professionals have trouble "timing" the market – that is buying when prices are low and selling when prices are high. A regular, systematic investment approach can give workers more consistent results over time. For this reason, workers should be limited in the number of times they can switch funds each year.
- *Take a long-term approach.* Investing for retirement is a long-term investment so there should be no need to panic if the value of that investment goes down. Workers need to be educated so they understand that it is important to stick to a strategy and be assured that most losses are usually recovered over time.

A common rule of thumb is that the percentage of a worker's assets in "safe investments" should not exceed his/her age. For example, if a worker is aged 20, s/he should have no more than 20 percent of his/her retirement savings invested in bonds. As s/he nears retirement that percentage can increase.

Taking it One Step at a Time

For all these reasons it is clear that a "one size fits all" investment portfolio is almost impossible to achieve, leaving worker investment choice as the only sensible option. However, going to the extreme of allowing each worker to choose how much s/he wants to invest in each asset class is often too large a jump in the initial stages of a reform. Workers need to be educated about financial matters and learn the importance of risk and return.

One way that funds can offer investment choice in the early days of a reform is to offer participants a range of pre-designed portfolios:

- A *money market option* which seeks to provide a high degree of capital preservation and a reasonable rate of return by investing in money market securities.
- A *conservative option* which seeks to provide a stable return with some upside by investing at least 80 percent of the portfolio in fixed interest securities (the remaining assets are invested in global equities).
- A *balanced option* which seeks to provide a reasonable level of medium term volatility by investing primarily (around 70 percent) in equities (the remaining 30percent is invested in bonds and cash).
- A *growth option* which seeks to maximize long-term returns by investing around 90percent in equities (the remaining 10 percent is invested in bonds and cash).

Workers then choose the portfolio that best suits them and their contributions are directed into that option. Alternatively, workers can choose to invest in more than one option – say 50 percent in growth and 50 percent in conservative – but this complicates record keeping and administration even further, and calls for a fairly sophisticated investor.

MAKING THE TRANSITION

Minimum Interest Rate Guarantees

One of the commonly offered guarantees is a guaranteed minimum rate of return (see Guarantees for more details). This is a common feature of the pension reforms in Latin America, where the funds' investment managers are required to implicitly guarantee a minimum rate of return. Click here for an example[xxvi].

Funding the Shortfall

In Chile, if a fund's rate of return exceeds the performance band, that excess cannot be paid to workers' accounts but is instead credited to a separate reserve in the pension fund. If a fund's return is lower than the specified "performance band", the management company is required to make up the difference.

Note that in Chile, the management company is responsible for both the investment and record keeping functions of a fund. The actual pension fund is a separate legal entity, which holds the workers' assets (like a custodian).

The steps for making up any shortfall in the rate of return are:

- Firstly, the fund's management company draws on the pension fund's reserve, if any, to supplement the return if it falls below the "performance band".
- If there is no reserve, or the fund's reserve is inadequate, then the fund's management company is required to next draw its own reserve (for example, in Chile the management company is required to have a reserve equal to 1percent of the fund's assets).
- If the management company's reserve is inadequate, then it must draw on its own assets to meet the performance band minimum.
- If it cannot meet this requirement, the Superintendent will immediately revoke its license and force a transfer of workers' accounts to another fund, which has a viable management company. This is intended to protect them the management whose license is revoked and which is technically bankrupt.

Outside of Latin America, an alternative is to fund the reserve through the operating revenues of the company that owns the pension fund (as proposed in Poland).

Disadvantages of a Guarantee

This "relative rate of return" guarantee, though well meant, is in fact an additional expense for workers, and a drag on market performance in the long-term. It acts as an investment performance disincentive, and investment managers become extremely risk-averse. They manage their portfolios according to the expected benchmark rather than in the best interests of the workers. Such a guarantee has proven to result in mediocre returns, and clustered returns in the example of Chile, the country with the longest history of such a program.

Diversification

As mentioned in Managing Risk, diversification lowers both risk and return by spreading investments across various classes of securities. It is usually a stated objective of government officials devising investment policy.

The most common measurement of risk is volatility, which is measured by the portfolio's:

- *standard deviation* – the performance of a security relative to itself, and
- *beta* – the volatility of a security relative to the market as a whole.

According to Markowitz and Modern Portfolio Theory, investors tend to move along the efficient frontier of securities. This allows them to enjoy the highest return possible for a given level of risk. This is possible through diversification.

Trends

In most newly reformed pension systems, pension funds are required to invest predominantly in domestic bonds and equities. History tells us there is extreme reluctance on the part of the government to allow investment in foreign securities.

However, it makes no sense to restrict investments to a newly reformed economy where capital markets are under-developed and may not have the capacity to absorb the massive inflow of money coming from the pension funds. In addition, the governments issuing the bonds may be unable to offer a suitable level of security as the reform will make many financial demands on them.

It is, therefore, recommended that governments consider widening the assets classes available to pension funds to include foreign investments from an early stage in the reform. Over time, history shows us that investment constraints do tend to be relaxed. Usually within 5-10 years, foreign investment, and investment in equities, are allowed.

In countries where the foreign investment was initially limited to a small amount, or not allowed at all, there has been a trend towards opening up the markets. Click here for more information[xxvii].

In countries that are currently in the process of reforming their pension systems, the trend shows that the governments are weighing more carefully the benefits of allowing greater foreign investment from the beginning. Click here for more information[xxviii].

A study of the actual returns in some of the reformed countries indicates that the more liberal investment policies have resulted in more favorable investment returns for workers. Click here to see a table showing the annual investment returns[xxix] in various countries.

A proper investment policy, developed along international standards, will define allowable investments, and may permit the Pension Superintendent to set allowable levels from within the ranges defined. For example, no more than 50 percent, and not less than 10 percent, in equities.

During the first five years following the reform (the transition period), the Superintendent can impose additional limits if there is a small capital market. For example, the above limits could be reduced to between 10 percent and 20 percent in equities. Failure to do this could require the funds to investment too heavily in any one security, for example.

So, while it is probably better to direct the investment of the majority of pension fund assets into domestic securities during the transition phase (say the first three to five years), it is very important that at least 25 percent is allowed to be invested in foreign assets. The foreign investments can be tightly controlled by specifying the countries or regions in which money may be invested, as well as by specifying that assets may only be invested in government bonds and blue chip securities.

After the transition period, by which time domestic capital markets have hopefully developed, the limits on each asset class should be broadened so investment managers do the job they are paid to do, which is to select the most appropriate asset allocation, and specific securities within asset classes, for the pension fund they are investing.

CHARGING FEES

Most of the first Latin American countries to reform their pension systems did not permit the funds' investment managers to charge a separate investment management fees. Fees could only be assessed as a percentage of all incoming contributions, and were generally charged as a percent of salary (rather than contributions). This had two effects:

- The services of non-contributing accounts were paid for by the accounts of working participants; and
- The pension funds placed great emphasis on attracting incoming contributions, and not so much on retaining assets under management.

Some countries charge workers a percentage of investment income (for example, Kazakhstan charges 10 percent). This acts as a sort of performance based fee for the investment manager and may discourage appropriate risk taking. It also leaves the investment manager with no income when investment performance is negative.

More recent reforms – such as those in Central and Eastern Europe – allow the investment manager to charge a fee based on assets under management, in addition to a percentage of incoming contributions. While the investment management fee is not large (in the case of Poland it is only 0.6 percent of assets), it is still an incentive for pension funds to retain workers rather than chase "new money". It also overcomes the problems of performance based fees.

An Example

In Mexico, each licensed fund has the flexibility under the pension law to assess fees as they believe to be in the best interest of their participants:

- Percent of assets managed;
- Percent of incoming contributions;
- Percent of investment return;
- Fixed currency amounts covering separate transaction fees for transfers between licensed funds, benefit payments, etc.; or
- Any mix of the above options.

The designers of the Mexican pension reform were very innovative in this regard. Since the new system began in September 1997, over 12.5 million workers have joined and were able to choose the fund whose fees most closely suited the worker's preferences. For example:

- Younger workers, who have a longer period of time to invest, may prefer a fund with investment performance based fees which gives the fund's investment manager an incentive to achieve higher returns in the long term.
- A worker closer to retirement may select a fund which imposes fees only on incoming contributions, with the expectation that contributions will soon cease to his/her account and fees will be avoided in future years.

The majority of the licensed funds in Mexico charge a small fee based on a percentage of assets, and then one other type of fee. It is still too early to evaluate the impact of the flexibility of the Mexican program, but by all international standards of implementation it is regarded as very innovative.

USING A CUSTODIAN

By all international standards the assets which make up the investment portfolio of a pension fund must be held in custody. There are two frequently employed options for custody:

(a) The investment manager makes the arrangements and uses its standard custodial relationship which may or may not be independent of the investment manager[xxx], or

(b) A common, independent custodian is selected for all the licensed pension funds, generally by the government or Pension Superintendent.

The second option is most logical in the reform’s early years as it allows the government or Pension Superintendent to secure a single contract on competitive terms. The cost is then charged to the licensed pension funds directly by the custodian, which in turn charge fees to the workers. As there is generally little distinction in service among custodians, the choice of a custodian is usually predominantly made considering cost. However, to ensure a low cost, the government must bid the contract on the international market

Conflict of Interest

Despite the common practices of developed European financial institutions, most of the concern in emerging markets is that there be independence and, wherever possible, additional separation of duties and responsibilities. Thus, the trend in emerging markets’ pension reforms is that the pension law mandate independence between the licensed investment managers and the custodians. Further, the use of a central securities clearing agency is not regarded as a secure and independent option.

Communicating the Implementation

If any pension reform is to be successful, a clear, planned and targeted communication campaign is essential. This involves three steps.

- Identifying the Audience
- Developing and Executing Targeted Communication for Each Audience
- Measuring the Effectiveness of the Communication Exercises

Identifying the Audience

The first step in planning the communication campaign is to identify the audience. In a pension reform there are many potential audiences, each with different needs, expectations and challenges:

(a) In the government
- Parliament
- Ministers and department heads
- Government agencies responsible for overseeing the pension and insurance industries (such as the Pension Superintendent)

(b) In the general population
- Current pensioners
- Workers in the formal sector
- Workers in the informal sector
- Self-employed workers
- Unemployed workers
- Women at home
- People not yet of working age

(c) Those with a special interest
- Unions
- Companies' human resources departments
- Companies' accounting and payroll departments
- Pension funds – both local and international
- Investment management companies – both local and international
- Insurance companies – both local and international
- Companies listed, or soon to be listed, on the local stock exchange
- Journalists – both local and international

Developing and Executing Targeted Communications for Each Audience

Once the audiences have been identified, it is necessary to determine the messages that each needs to receive and the best way of reaching them. Answering the following four questions can help in developing an appropriate and targeted communication strategy for each group.

While we have phrased the four questions for the audience groups listed in Communicating the Implementation, the same questions can be used by a pension fund seeking to develop its own marketing strategy. In that case, the fund should first develop a profile of its target participant[xxxi] and then answer the following questions bearing in mind that participant.

Question 1: What does this group need to know about the reform?

Each group has different information needs.

(a) Parliament and ministers need to know why the reform is necessary and its expected social and economic impact. The newly established government agencies will need to fully understand their roles, duties and responsibilities

(b) Current pensioners and workers need a lot of information if they are to believe in the reform, particularly about how they personally will be affected:

- How their level of contributions will change;
- How their level of benefits will change;
- How the process of making contributions will change;
- How the process of claiming a benefit will change;
- Why the changes are happening;
- Why they should feel secure in the new system;
- What government guarantees they are offered;
- Their rights and responsibilities (e.g. choosing a pension fund); and
- Where they can go for further information.

Women at home, and people who have not yet reached working age, will want to be reassured that they will not be disadvantaged by the new system, and its impact on them if and when they start working.

(c) Unions must have a clear understanding of why the reform is occurring, and how their workers will be affected, if the reform is to be trouble-free.

Companies' human resources, accounting and payroll departments will need to know what they need to do to comply with the new legislation, and what their employees need to do.

The new players in the market – the pension funds, investment management companies and insurance companies – will need to know the requirements for becoming licensed and operating under the new system.

Companies that are listed on the stock exchange, or soon to be, will be interested in knowing the expected impact on the capital market. A newly privatized, accumulation pension system usually results in much money flowing into the capital market which will be of interest to companies looking to raise capital or issue stock or bonds.

Journalists play a critical role in any reform – they can make or break it by the information they convey, and the tone they take, in their articles. Positive news can increase people's confidence, which in turn will increase participation in the new system. On the other hand, negative news can prove to be self-fulfilling if people cease to participate, contribution levels fall, and funds cannot cover their expenses.

Question 2: What are the advantages and disadvantages of the reform for this group?

It is important to fully understand the pros and cons of the reform from each group's perspective. This is invaluable in developing appropriate communication strategies.

Obviously one hopes that the advantages outweigh the disadvantages for each group, however, that may not always be the case. It is best not to try to hide the disadvantages, but rather to demonstrate why they are necessary. For example, since workers' future benefits will depend on future investment earnings it cannot conclusively demonstrated that they will be better off under the reformed system. However, there is wide evidence from all around the world that current social security systems are not financially sustainable. Thus, while it is regrettable that workers' benefits may be lower in the future, there was never any guarantee that the benefits they had been promised under the old system would actually be paid to them.

Question 3: What does this group already know about the reform?

Initially each group will have some information about the reform, but it will probably be incomplete, inaccurate and biased towards the negative aspects. It is important that the official communication campaign be the exact opposite – complete, accurate and balanced.

If there has been any media coverage prior to the official campaign, it is necessary to collect details of the articles and events, and the content and tone of the information conveyed in them. In particular, any commonly held misconceptions, inaccuracies, and obvious omissions should be noted and strategies devised to remedy them.

Question 4: What is the best way of reaching this group?

This is perhaps the most difficult question to answer and calls for creative, lateral thinking. It is best to tackle it as a series of smaller questions:

(a) *What form of media does this group trust?*
For example, are newspapers widely read? In what language? Are television and radio considered to be independent? Is written material such as brochures appropriate? In what language?

(b) *What institutions/services/products does this group consider trustworthy?*
What are not considered trustworthy?
For example, are banks trusted? Do people trust the government, or do they trust the private sector more? Are multi-national companies respected or viewed with suspicion?

(c) *Are there any existing communication channels that can be used?*
Is there one activity that the vast majority of this group does on a regular basis? For example, if the population receives regular electricity bills, and the electricity company is regarded favorably, the back of the bills could be used for general announcements about the pension reform. This would not work successfully if a large percentage of the population have an irregular supply of electricity or the electricity company has a reputation for ripping off its customers.

The best advice is to approach this step with an open mind and rule out nothing – consider all possibilities. Click here to see our examples[xxxii] for some inspiration.

Measuring the Effectiveness of the Communication Exercises

Even with the most well planned communication exercise, success cannot be assured. It is necessary to measure the effectiveness of the various activities so that future activities can be planned, and existing plans modified.

In developing effectiveness measures, it is necessary to bear in mind the purpose of the activity. Some examples are:

(a) **Surveys** – which could follow a series of public announcements and be used to assess the range of people reached and the information they remember.

(b) **Focus groups** – which could be used prior to issuing advertisements and public announcements to assess people's reactions. This is especially recommended for avoiding cultural blunders.

(c) **Specific targets** – for example,

- The number of workers enrolled in the pension system;
- The compliance rate (the percentage of workers making pension contributions);
- The number of workers making voluntary contributions;

- The number of hits on a web site; or
- The number of calls to a phone hotline and the type of questions asked.

These measures can provide insight into people's understanding of, and appreciation for, the new system following a communication campaign.

Part 5: Pension Atlas

PART 6:
Glossary of Terms

GLOSSARY OF TERMS

Actuarial Fairness	Method of setting insurance premiums according to the true risks involved.
Adverse Selection	Problem stemming from an insurer's inability to distinguish between high and low risk individuals. The price for insurance then reflects the average risk level, which leads low-risk individuals to opt out and drives the price of insurance still higher until insurance markets break down.
Annuity	A guaranteed income paid on a periodic basis (e.g., monthly) to an annuity purchaser. Insurance companies sell annuities to purchasers who receive fixed payments for a lifetime or for a specified number of years.
Defined-Benefit Plan	A pension plan that guarantees retirement income to participants that is based on prescribed formula. Generally, the formula is based on the participant's past earnings and number of years of contribution. The sponsor of the pension or retirement plans is responsible for having sufficient funds to meet the obligations of the plan. See A Defined-Benefit System for more details.
Defined-Contribution Plan	A pension plan in which the contributions to the participant's account determines the benefit amount paid to the participant. The benefit amount is solely based on past contributions and accrued interest. See A Defined-Contribution System for more details.
401(k) Plan	Defined-contribution plan enabling employees to save for retirement by contributing a portion of their compensation on a pre-tax basis. For a defined-benefit plan, the degree of funding of the plan depends on projections for its future obligations and investment returns.
Fully-Funded	A pension plan that has sufficient funding today that is able to meet the obligations of all future benefits.

Gross National Product (GNP)	Gross national product (GNP) is the value of all final goods and services produced within a nation in a given year, plus income earned by its citizens abroad, minus income earned by foreigners from domestic production.
Intergenerational Distribution	Income transfers between different age cohorts of persons, e.g. current workers paying for current retirees rather than for their own retirement.
Intragenerational Distribution	Income transfers within a certain age cohort of persons, e.g. current workers paying for their own retirement.
Means-Tested Benefit	Benefit that is paid only if the recipient's income falls below a certain level.
Minimum Pension Guarantee	Guarantee provided by the government to bring pensions to some minimum level. Options include "topping up" the capital accumulation needed to fund the pensions or simply supplementing the licensed pension company specific amounts annually, which will in turn pay a higher amount so that the pension meets the minimum level.
Notional Accounts	In a system of notional accounts, a record is made of contributions paid by employer/employee into the individual notional account, but in contrast to funded pension systems, no real funds are accumulated into the accounts, only notional capital. The pension benefit is calculated by dividing the total funds accumulated in each individual account (notional capital) by the post-retirement average life expectancy of the individual's cohort.
Old Age Dependency Ratio	Ratio of older persons to working age individuals. The old age dependency ratio used in the next refers to the number of persons over 60 divided by the number of person's aged 20 to 59.
OASDI	Old-Age and Survivors Insurance and Disability Insurance - the monthly benefits paid to retired workers, disabled

	workers and dependents and survivors of insured workers by social security and the financing for those benefits.
Pay-As-You-Go (PAYGO)	Method of financing whereby current outlays on pension benefits are paid out of current revenues from an earmarked tax, often a payroll tax.
Pension Dependency Ratio	Ratio of pensioners to labor force participants.
Pillar I	Mandatory public pension system in which contributions are not directly deposited into individual employee accounts, but the government exercises its sovereign taxing power to require contributions from workers, employers or other categories of individuals or enterprises. Pillar I systems are generally referred to as PAYGO pension systems, though this is not strictly true. Contributions may be used to pay for benefits of current retirees or used for a combination of financing future pension benefits and current pension costs. See Pillar I for more details.
Pillar II	Mandatory pension component where the government requires contributions on behalf of certain categories of individuals. Contributions may come from individuals, employers or the government. Contributions are deposited in individual accounts and an individual's retirement benefits will depend on the balance in the account and accrued interest at the time of retirement. The accounts may be managed by either a public or private entity. However, since the system is mandatory and designed to meet certain social goals, private entities managing individual accounts are usually subject to considerable government oversight and regulation. See Pillar II for more details.
Pillar III	Voluntary private pension systems where the government does not mandate participation. Pillar III pensions tend to be either occupational plans, sponsored by employers, or personal savings plans. See Pillar III for more details.
Provident Fund	Fully funded contribution scheme in which funds are managed by the public sector.

Replacement Rate	Value of a pension as proportion of a worker's wage during some base period, such as the last year or two before retirement or the entire lifetime average wage. It also denotes the average pension of a group of pensioners as a proportion of the average wage of the group.
Retirement Age	Normal retirement age which is written into pension statutes.
Trust Fund (Social Security)	Social Security program has trust funds that receive revenue earmarked for this program and from which benefits and administrative expenses are paid. There are separate funds for Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI).
Vesting Period	Minimum amount of time required to qualify for full ownership of pension benefits.

TARGET WAGE REPLACEMENT RATE

Pension as Percentage of	Household Target	Mandatory Target		
		Low-Income	Middle-Income	High-Income
Net average lifetime wage	100	81	78	78
Gross average lifetime wage	78	63	60	60
Net final year wage	70	55	53	53
Gross final year wage	54	44	42	42
Gross economy-wide wage	n.a.	33	42	42

n.a. Not applicable.

Note: The table is based on the following assumptions:

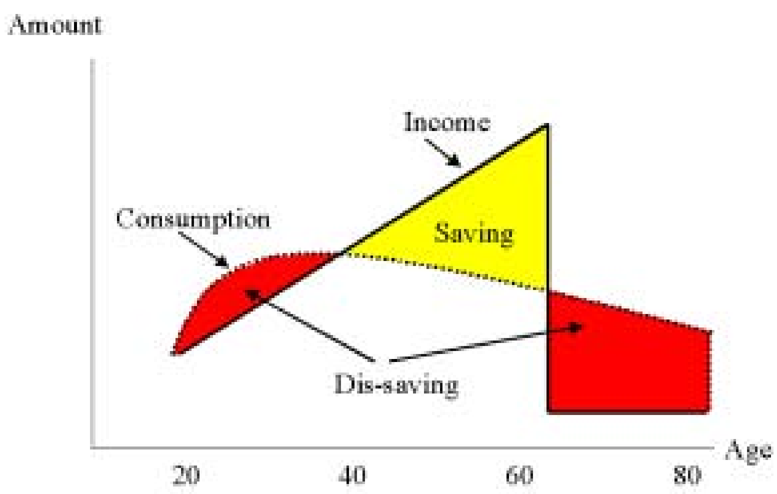
- The household target pension is 100 percent of the net average lifetime wage.
- The mandatory target pension is 60 percent of gross average lifetime earnings, with a floor at 33 percent of the economy-wide wage.

The floor takes hold for low-income groups.

- Everyone begins work at age 20, retires at 60, dies at 80, and there are equal numbers of poor, middle-income, and rich workers.
- Starting wage is 33 percent higher for middle class and 67 percent higher for rich than poor.
- Annual wage growth is 2 percent.
- A saving or contribution rate of 22.5 percent is assumed in net-to-gross calculations.
- In economy-wide average calculations, the population is split between low-, middle-, and high-income groups in the ratio of 3:2:1.

Source: World Bank. Averting the Old Age Crisis.

[i] THE LIFE CYCLE THEORY OF CONSUMPTION



[ii] AVERAGE REPLACEMENT RATES IN VARIOUS COUNTRIES

	Average Replacement Rate[1]		
	1990	1993	1996
Eastern European countries			
Bulgaria	42.8	40.2	31.4
Croatia	73.0	62.0	35.4
Czech Republic[2]	47.6	43.4	47.8
Hungary	49.7	47.3	41.4
Poland	59.0	76.8	61.3
Romania[2]	41.9	26.0	29.7
Slovak Republic	48.3	44.0	42.0
Baltics, Russia, and other countries of the former Soviet Union			
Armenia	44.6	30.7	24.3
Azerbaijan	42.3	21.2	29.2
Belarus	40.1	38.0	40.9
Estonia	----	----	29.4
Georgia	----	----	36.4
Kazakhstan	38.5	39.3	34.0
Kyrgyz Republic	44.8	38.4	48.5
Latvia	31.2	33.3	38.6
Lithuania	36.3	28.4	30.8
Moldova	38.6	32.1	40.1
Russia	38.0	24.5	28.4
Tajikistan	47.8	45.9	23.7
Turkmenistan	41.1	47.5	53.3
Ukraine	41.6	26.9	32.7
Uzbekistan	45.1	29.9	40.9
Major advanced economics[3]			***37.5***

[1]The average pension in terms of the average wage.
[2]The system dependency ratios for the Czech Republic and Romania reflect data for 1995.
[3]Major advanced economies include the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada; for the system dependency ratio, unweighted average of selected OECD countries.

Source: International Monetary Fund (May 1998).

[iii] **EXAMPLES OF EARLY RETIREMENT PROVISIONS**

In Chile once a participant's account value equals the amount needed to purchase an annuity that would provide a pension benefit at least equal to 50 percent of their average salary earned over the last 10 years of work, and 140 percent of the legal minimum wage, they are allowed to use the account assets for retirement.

[iv] **CONTRIBUTION LEVELS**

Country	Mandatory Employee	Mandatory Employer	Total Contributions
Argentina	11.0%	16.0%	27.0%
Bolivia	12.5%	None	12.5%
Bosnia and Herzegovina			
Bulgaria	2.0%	37.0%	39.0%
Canada	3.0%	3.0%	6.0%
Chile	10.0%	None	10.0%
Croatia	10.75%	10.75%	21.5%
Czech Republic	6.5%	19.5%	26.0%
Georgia			
Ghana	5.0%	12.5%	17.5%
Hungary	7.0%	24.0%	31.0%
Kazakhstan	10.0%	15.0%	25.0%
Kyrgyz Republic	2.0%	29.0%	31.0%
Latvia	9.0%	28.0%	37.0%
Mexico	2.1%	13.0%	15.1%
Moldova	1.0%	38.0%	39.0%
Peru			
Private		None	
Public		None	
Philippines	3.33%	4.67%	8.0%
Poland	None	45.0%	45.0%
Romania	3.0%	25.0%	28.0%
Russia			
South Africa	None	None	None
Sweden	6.95%	33.03%	
Turkey	14.0%	19.5-22.0%	
Ukraine			
United Kingdom			
United States			
Zimbabwe	3.0%	3.0%	6.0%

[v] **EXAMPLES OF TAXATION OF PENSION SYSTEMS**

Country	Contributions	Investment Earnings	Benefits
Australia	*Taxable*	Taxable	Taxable
Canada	Tax-Exempt	Tax-Exempt	Taxable
Chile	Tax-Exempt	Tax-Exempt	Taxable
Denmark	Tax-Exempt	Taxable	Taxable
Ireland	Tax-Exempt	Tax-Exempt	Taxable
Kazakhstan	Tax-Exempt	Tax-Exempt	Taxable
Netherlands	Tax-Exempt	Tax-Exempt	Taxable
New Zealand	Taxable	Taxable	Tax-Exempt
Singapore	Tax-Exempt	Tax-Exempt	Tax-Exempt
United Kingdom	Tax-Exempt	Taxable	Taxable
United States	Tax-Exempt	Tax-Exempt	Taxable

NOTE: In this table, the term “tax-exempt” means that tax is not paid at the time the contributions are made, investment income earned or benefits received.

[vi]

In some countries an agency of the government also establishes and manages a licensed fund. Some examples include Argentina and Kazakhstan. In Singapore and Malaysia, for example, the government runs the one and only pension fund.

[vii] **WAYS TO STRUCTURE REGULATORY OVERSIGHT**

One Super Superintendent